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ANNUAL REPORT

OF THE

DEPARTMENT OF AGRICULTURE

OF THE

PROVINCE of ALBERTA

1918

PRINTED BY ORDER OF THE LEGISLATIVE ASSEMBLY



EDMONTON:
PRINTED BY J. W. JEFFERY, KING'S PRINTER
1918



COTTONWOODS AND COWS, SOUTHERN ALBERTA

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DEPARTMENT OF AGRICULTURE,

EDMONTON, DECEMBER 31ST, 1918.

TO HIS HONOUR

ROBERT GEORGE BRETT,

Lieutenant Governor of the Province of Alberta.

SIR,—

I have the honour to submit herewith the Report of the Department of Agriculture for the year 1918.

I have the honour to be, Sir,

Your obedient servant,

DUNCAN MARSHALL.

Minister of Agriculture.

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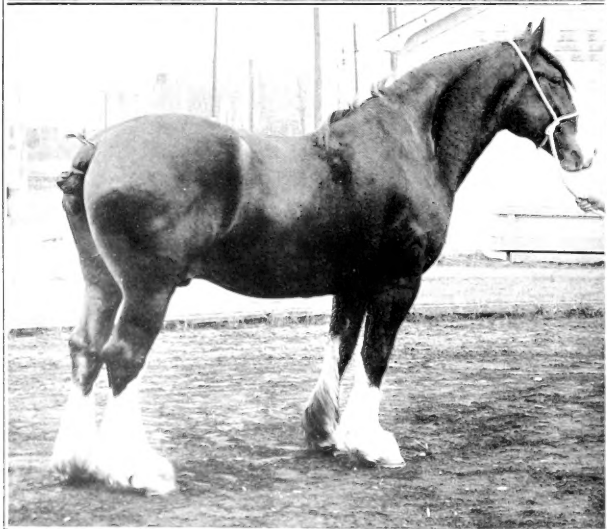
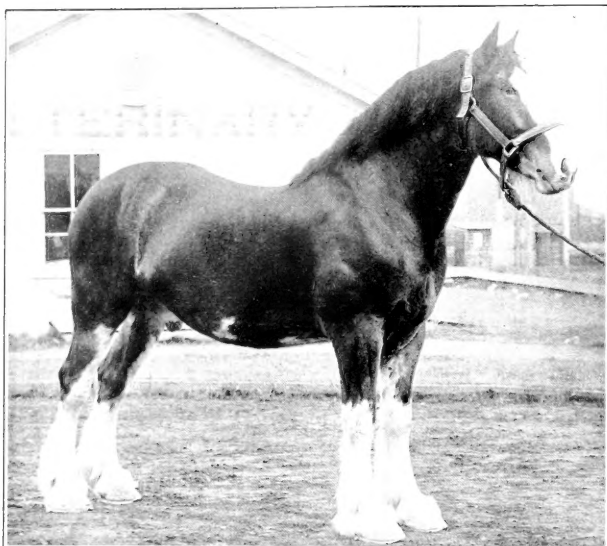
Appendix to Report of Live Stock Commissioner.

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DEPARTMENT OF AGRICULTURE

Heads of Branches.

- S. G. Carlyle, Superintendent of Demonstration Farms.
- A. E. Meyer, Superintendent of Agricultural Schools.
- E. A. Howes, Dean of College of Agriculture.
- P. R. Talbot, Provincial Veterinarian.
- W. F. Stevens, Live Stock Commissioner.
- C. P. Marker, Dairy Commissioner.
- A. Galbraith, Superintendent of Fairs and Institutes.
- Miss M. MacIsaac, Superintendent of Women's Institutes.
- J. D. Smith, Superintendent of Seed and Weed Branch.
- A. W. Foley, Poultry Superintendent.
- J. H. Hare, Poultry Marketing Commissioner.
- J. Wilson, Brand Recorder.
- B. Lawton, Chief Game and Fire Guardian.
- J. McCaig, Chief Publicity Commissioner and Editor of Publications.



DRAFT CHALLENGES AT THE EDMONTON SPRING SHOW

REPORT OF THE DEPUTY MINISTER

HON. DUNCAN MARSHALL,

Minister of Agriculture,

Edmonton.

SIR,—I have the honour to submit herewith the annual report of the Department of Agriculture. The heads of the various branches have outlined their work in detail.

The season from an agricultural standpoint has been a peculiar one in that the southern part of the Province was visited by a rather severe drought and the northern part by a fairly heavy frost. Toward late summer some anxiety was felt as to whether or not there would be sufficient feed to carry the live stock of the Province over the winter. In the southern portion of the Province there was a tendency on the part of stockmen to dispose of their breeding stock.

The Department immediately communicated with the Dominion Government and with the railway freight association, laying before them the seriousness of the situation and urging that in view of the fact that the northern part of the Province possessed a large amount of surplus rough feed, low rates on live stock shipped north and feed shipped south should immediately be granted and advertised so that those wishing to take advantage of them could make plans accordingly. A meeting was called in Winnipeg at which the railways, the Dominion Government and the Provincial Governments of the Prairie Provinces were represented. At this meeting it was decided that the railway companies would immediately place rates in effect whereby stock shipped north for feeding purposes and coarse feed shipped south to relieve the feed shortage, would be charged only 50% of the freight rate previously in force. The Dominion Government also agreed to pay to the railway companies the full amount of the reduced freight rate, making it possible for the stockmen to either ship their stock north or their feed south free of charge. In order to secure this freight rate it was necessary according to the new tariff printed to have a certificate from the Provincial Deputy Minister of Agriculture stating that the animals shipped north were being transferred for feeding purposes only and not for sale, that they would be returned within a certain specified time to the original point of shipment, and in the case of feed, that it was being shipped south for the purpose of feeding to stock and not for the purpose of barter or sale. Although the feed situation in the southern part of the Province considerably improved in the latter part of the season due to much-needed rains, there is no doubt but that the policy providing for free shipment of feed for stock is to be credited with the saving of a very large proportion of the breeding stock of the south from going to the slaughter house. The best evidence of this can be had from the figures showing the number of live stock shipped north and the amount of feed shipped south under this tariff. The following is a statement compiled on December 31st, 1918: 31,351 cattle, 59,405 sheep and 182 haymaking outfits moved north. Certificates for free transportation of hay shipped south were issued covering a total of 86,438 tons.

These figures do not represent the total movement as applications at the end of the year are coming in as rapidly as at any previous period and no doubt will continue to come in through most of the winter.

In spite of the drought and frost mentioned, we can count approximately \$1,000,000 of an increase in our agricultural production this year over other years. This is attributable in some measure to the production campaigns which have been carried on by both Dominion and Provincial Governments, to some extent to the increase in prices of farm products and to some considerable extent to the desire of the people on the land to contribute towards the world's food supply in the interests of the Allied Cause. It is significant, in studying the statistics of the Province, to find that our acreage under cultivation has practically doubled in five years and also that the cattle stock of the Province has increased to the same extent. Both of these factors indicate stability and prosperity even in the face of very adverse conditions. Our live stock development has been marked particularly by the increase in pure-bred herds and flocks that have been established. It is quite remarkable that there has been a very distinct increase in the numbers of pure-bred herds of beef cattle and the same is true of several breeds of swine and sheep. Another significant feature of the development of live stock is that large numbers of the range sheep from Southern Alberta have been absorbed by small farmers throughout the central portion of the Province.

Grain Yields.

The figures for crop yields for the season are the lowest yet recorded, due to conditions which have been previously mentioned. It must not be inferred, however, that the crops were light in all parts of the Province for as a matter of fact, even through Southern Alberta a considerable area of the summer-fallowed land yielded as high as twenty-five bushels of wheat to the acre. Crops on spring and fall ploughing, however, were very light and in many cases not worth cutting. Throughout the central portion of the Province, there was a considerable area where first class crops were harvested, the country not being affected by frost and very slightly affected by the dry weather. There is no doubt but that the frost caused a great reduction in yield over the northern territory and yet a large amount of good wheat, oats and barley have been threshed, much of which has not been injured by the frost. This will result in providing most of the seed which will be necessary for next year's crop. A considerable amount of the grain which was frozen was cut for green feed. Some of it was baled and shipped south under the free tariff and a great deal is being used by stockmen.

Greater Production Campaign.

The Provincial Department joined with the Federal Department in what was called "A Greater Production Campaign." Funds were supplied by the Dominion Government equal to those granted by the Province for the purpose of carrying on this work. Arrangements were completed whereby the Province was divided into sixteen districts and an agricultural agent to represent the Department placed in charge of each district. Motor cars were supplied to each of the men and the representatives were asked to encourage increased production of farm products in every pos-

sible way. Farmers were appealed to on the ground that food products were necessary in the interests of the Allies. All information which was forthcoming during the spring from the seat of War indicated that food of every kind was exceedingly scarce. It is to be reported that the farmers of Alberta responded splendidly to the appeal of the Federal and Provincial Governments for greater production. Unquestionably, the high prices prevailing made it an inducement for farmers to respond, yet it must be stated that from a patriotic standpoint, people on every hand seemed willing and anxious to help.

The Canada Food Board approached the Department early in the spring with a proposal to supply small tractors to farmers at factory price plus freight. In order to carry out this plan, arrangements were made with each of the Provinces whereby the Provincial Departments of Agriculture would handle the tractors free of charge, receiving the order with the purchase price, forwarding it to the central offices of the Food Board and looking after the general handling and distribution of the tractors. The price was arranged with the Fordson Tractor Company and a flat freight rate was arranged which gave the farmers a very cheap small tractor. Farmers took advantage of this offer and in Alberta three hundred and thirty-eight tractors were sold and delivered. Small tractors of various other makes were sold direct to farmers with the result that the tractor has become a very important factor in the farming operations of our Province. There can be no question but that it is responsible for the large increase in breaking which has been accomplished during the past year or two.

Changes in Staff.

During the year, Mr. A. E. Meyer has been appointed Superintendent of Agricultural Schools. Mr. C. S. Hotchkiss resigned from the Department as Publicity Commissioner on account of ill health, his work being taken over by Mr. James McCaig, who is carrying on his duties as Editor of Publications in addition to those of Publicity Commissioner.

Arrangements have been made whereby the securing of farm laborers has been transferred to the Labor Branch recently established.

Respectfully submitted,

H. A. CRAIG,

Deputy Minister.



HOLSTEIN, VALE DORCO, HOLSTEIN AT STONY PLAIN, DEMONSTRATION FARM. SEVEN DAYS MILK RECORD 1987 LBS.
EQUVALENT OF 308 LBS. OF BUTTER

REPORT OF THE PROVINCIAL DEMONSTRATION FARMS

SIR.—I have the honour to submit herewith the annual report of the Provincial Demonstration Farms.

The Effects of Frost and Drought.

The Demonstration Farms crops during the past year have been subject to injury from the same unfavorable season and weather conditions that caused such widespread failure among the farmers in both the northern and southern parts of the Province. The prospects in the spring for good crops were never better. The season opened early with the soil in good physical condition and with sufficient moisture for germination and for the plants to get a good start, but drought combined with high winds the latter part of June and first part of July cast a gloom over farming operations in the southern part of the Province. The crops in the north made a splendid growth, and the yield showed promise of being unusually high until the night of the 23rd of July when the greater part of the north country was hit with one of the worst frosts in its history. It affected the crops on the Athabasca, Stony Plain, Vermilion and Sedgewick farms to a greater or less extent, Sedgewick being hit very seriously.

In compliance with the request of the Canada Food Board for greater production of food stuffs, considerably more wheat was sown on these farms than formerly, and as wheat was more affected by the frost than any other crop our losses were correspondingly greater than they would have been in normal times. On the Sedgewick farm an area of ninety acres of wheat was sown on well worked summer-fallow, but owing to the frost none of it was fit to thresh and was mostly cut for green feed and made use of in that way. The barley on this farm was also a complete failure. The oats yielded a fair crop. The same conditions existed at Athabasca, Stony Plain and Vermilion, though the damage was not so great. This is another instance which shows that in Central and Northern Alberta mixed farming in which live stock forms an important part is the only safe method of farming to follow. If the crops are damaged by frost or hail enough feed is generally harvested to winter live stock.

The farms in the southern part of the Province suffered greatly from drought. This is especially true of the Medicine Hat farm where two dry seasons followed in succession. The result this year was very discouraging though a fair crop of green feed was harvested. On the Claresholm farm where the land was summer-fallowed and on corn ground the crops were good. Wheat yielded nearly thirty bushels per acre and oats forty. On late fall and spring plowing the crops suffered very considerably from the drought.

Corn Crop.

The corn crop on the Claresholm farm has proved one of our best paying fodder crops. Each year a portion of the land intended for

summer-fallow is used for the growing of corn. The manure from the stable is hauled out through the winter on this piece of land and as soon as the small grains are sown the manure is plowed under, the land packed and harrowed, and the corn planted in check rows about May 26th. It is then harrowed every week until the corn plants are high enough to make it possible to use the corn-cultivator. Cultivation of the soil in this way conserves moisture, cleans the land of weeds and gives practically as good returns the next year as summer-fallow and in addition to this gives a yield of from five to ten tons of fodder per acre. In the following spring the corn ground is cultivated, sowed and harrowed without plowing.

Rape.

On this farm a field of ten acres was sown to rape in drills twenty-eight inches apart about the end of April. The stock was turned on about the middle of June and this crop formed the bulk of the pasture for the remainder of the season. Rape is not a safe pasture used exclusively. If animals are turned on when the leaves are wet with dew or rain, bloating and indigestion are likely to occur, and if the sun comes out hot before the leaves are dry, the noses, teats and udders of the cows are likely to sun scald, but used in conjunction with any of the grasses, either tame or natural, no other plant will give the same amount of pasture on a small acre. Sheep are especially fond of it and will keep gnawing at the roots long after the ground is frozen.

Fall Rye.

Fall Rye continues to be the leading pasture crop especially in the south country, and during the past summer when high winds were so prevalent, it proved a useful crop to prevent soil drifting. As time goes on this crop will be more and more used for the purpose besides furnishing excellent pasture and a paying crop in threshed grain.

Sweet Clover.

Two acres of Sweet Clover were sown on the Sedgewick farm this year. It will be tried out and if it proves to be a profitable crop its cultivation will be extended to the other farms, and it will take a place in the rotations. The weakness in a rotation of crops in this Province is the failure to grow profitably any leguminous crop which is so important in adding nitrogen to the soil.

Alfalfa.

Alfalfa on both the Claresholm and Medicine Hat farms stood the drought better than any of the clovers or tame pastures. Nevertheless the yield was light though the quality of hay was good. On the Sedgewick farm alfalfa has never given a good yield so it was plowed up and a couple of acres sown again on heavier soil. This made a good stand and is expected to come through the winter in good condition. Another piece will be sown on the Stony Plain farm again next spring.

Seed Grain.

There was a good demand for seed grain and a large quantity of wheat, oats and barley was sold from the Claresholm farm, and oats from

the Sedgewick farm. The varieties were Marquis Wheat, Banner Oats, and O.A.C. No. 21 Barley. An effort is being made to grow one or two fields of seed grain of some selected variety on each farm to be available for farmers to purchase.

Dairy Herds.

The dairy herds have done well on the Demonstration Farms. On the Stony Plain Farm the pure-bred Holsteins are coming along well and some creditable records have been made in both the seven-day and yearly tests. Below are some official and semi-official records made during the past year:

Holsteins, Seven-Day Test—

Lady Ormsby Boanerges, 2 years, Milk 401.8 lbs.; Fat 13.82 lbs.
 Daisy of Ferndale, mature, Milk 486.8 lbs.; Fat 18.85 lbs.
 Lizzie Korndyke Wayne, mature, Milk 433.5 lbs.; Fat 15.43 lbs.
 Vronka Mercedes, 3 years, Milk 471.5 lbs.; Fat 17.89 lbs.
 Aliene Mechthilde Korndyke, 2 years, Milk 393.4 lbs.; Fat 15.59 lbs.
 Camille Abbecker Korndyke, 2 years, Milk 402 lbs.; Fat 14.72 lbs.

Holsteins, Yearly Test—

Julia Korndyke, 4 years, Milk 9,593 lbs.; Fat 313 lbs.; 297 days.
 Camille Abbecker Korndyke, 3 years, Milk 10,451 lbs.; Fat 333 lbs.; 358 days.
 Lizzie Wayne DeKol, 2 years, Milk 9,095 lbs.; Fat 276 lbs.; 364 days.
 Vronka Mercedes, 3 years, Milk 10,203 lbs.; Fat 350 lbs.; 317 days.
 Vronka Pietertje Korndyke, 3 years, Milk 10,651 lbs.; Fat 348 lbs.; 301 days.
 Cora Korndyke DeKol, 2 years, Milk 8,779 lbs.; Fat 348 lbs.; 317 days.

Jerseys, Yearly Test—

Br. Cora, mature, Milk 8,840 lbs.; Fat 485 lbs.; 300 days.
 Br. Alfriston Queen, mature, Milk 9,094 lbs.; Fat 496 lbs.; 348 days.
 Br. Derry's Fancy, mature, Milk 9,986 lbs.; Fat 472 lbs.; 365 days.
 Br. Beauvoir Tornado, mature, Milk 9,231 lbs.; Fat 475 lbs.; 351 days.

Ayrshires, Yearly Test—

Burnside Ivy Queen, mature, Milk 9,425 lbs.; Fat 393 lbs.; 315 days.
 Janet of Clareholm, mature, Milk, 8,510 lbs.; Fat 318 lbs.; 238 days.
 Burnside Elfrieda 2nd, mature, Milk 10,988 lbs.; Fat 335 lbs.; 365 days.

Shorthorns, Yearly Test—

Clara H., 4 years, Milk 5,309 lbs.; Fat 227 lbs.; 275 days.
 Dairymaid, mature, Milk 8,384 lbs.; Fat 353 lbs.; 312 days.
 Butterfly's Lady McKay, mature, Milk 7,297 lbs.; Fat 339 lbs.; 365 days.
 Butterfly's Lady McDonal, mature, Milk 5,549 lbs.; Fat 331 lbs.; 265 days.

There was considerable controversy last fall between the farmer and milk dealer, and between the milk dealer and consumer regarding the price of milk. The manufacturer and business man, when they place their goods on the market know exactly the cost of their goods and are therefore in a position to demand a certain price in order to secure a profit.

Owing to the high cost of labor and to a similar high cost of feed concentrates, which are essential to maximum milk production, the cost of producing milk for the past two years has been abnormally high. Unfortunately the price of milk and milk products did not increase in price to the same extent during the first three years of the war as did the price of feed and labor, consequently there was small and in some cases no profit, which caused a great deal of discontent and unrest among the producers and was the means of reducing a great many dairy herds.

The farmer on account of the size of his business is not in a position to engage a competent man to keep his books, much less to develop a system of cost accounting. The Minister of Agriculture, recognizing the importance and need of knowing the cost of farm commodities, had installed a few years ago on the Demonstration Farms, a farm cost accounting system which is being gradually perfected so that now we are in a position to give out some results.

On the Stony Plain and Medicine Hat farms where dairying is the main line of operation, the results for the past two years vary considerably.

On the Stony Plain farm the herd consists of pure-bred and grade Holsteins. In 1917 twenty-eight cows were milking and their average production was 7,303 lbs. at a cost of \$3.02 per hundred. In 1918 most of the grade cows were culled out, and their place was taken by some two-year-old pure-bred heifers, a total of twenty-three being milked, their average production increased to 8,500 lbs. and the cost reduced to \$2.55 per hundred. These results were due to better cows and better management with practically the same feed.

On the Medicine Hat farm the conditions were somewhat the reverse. On this farm pure-bred Jerseys were kept. In 1917 the average production of the herd was 7,161 lbs. at a cost of \$3.05 per hundred; in 1918 the product was 3,987 lbs. at a cost of \$3.55 per hundred lbs. These results were due to the continued dry weather which extended over a period of two years. In 1917 a partial crop was grown including some succulent feed which is essential to cheap milk production. In 1918 the season was so dry that roots and corn, which furnish the greater part of the succulent feed, never came up and the cattle had practically a dry ration. The production decreased nearly one-half but the cost only increased 50c per hundred, due to less labor, as there was very little crop to be harvested.

Your obedient servant,

S. G. CARLisle.

Superintendent of Schools and Farms.

REPORT OF THE SCHOOLS OF AGRICULTURE

SIR,—I beg to submit the following report of the Provincial Schools of Agriculture:—

The attendance at each School during 1918 has been satisfactory, except that it was affected somewhat by war conditions. The total number in attendance during the winter of 1918 was three hundred and twenty-eight—two hundred and thirty-nine boys and eighty-nine girls.

The course in our Schools is made as practical as possible and we endeavor to reach the boys and girls who have no other avenue for further education open to them. An increasing number of our graduates express a desire to attend the University College and thus complete the full course offered the agricultural student in this Province, but the great majority of them go back to the farms with an increased desire to become useful members in their respective communities and important factors in increasing the wealth of the Province.

Some changes were made in our courses of studies at a conference of the staffs held at Edmonton last April. Rural Economics and Sociology were given a little more prominence with a view to aid in widening the graduate's sphere of usefulness in his or her community.

It was a keen disappointment that it was found impossible to open any of the schools because of the epidemic of influenza this fall. Each school was turned into a hospital and the members of the staffs assisted as nurses and by doing other work about the institutions.

A number of our Instructors were engaged as Greater Production Agents from April 1st until July 31st. Those engaged were Messrs. Geo. R. Holeton, S. D. Snyder, N. S. Smith, J. G. Taggart, E. E. Brown, A. E. Qually, H. W. Scott and R. M. Scott. Messrs. Hooper, Smith and Loughlin were engaged at School Fair work at Claresholm, Olds and Vermilion respectively. The lady members of our staffs assisted the Women's Institutes Branch and judged at School Fairs.

The detailed reports of the Principals follow.

Respectfully submitted,

A. E. MEYER,

Superintendent of Schools of Agriculture.

CLARESHOLM SCHOOL OF AGRICULTURE

SIR,—I beg to submit the fifth annual report of the Provincial School of Agriculture, Claresholm.

This report covers the work of the Claresholm School of Agriculture from January 1st, 1918, to January 1st, 1919, together with extension and other work that has been undertaken by the staff.

The School closed March 28th, 1918, with the following staff of instructors:

W. J. Stephen, B.A., B.S.A., Principal and Instructor in Field Husbandry.
 H. W. Scott, B.S.A., Instructor in Animal Husbandry.
 A. E. Qually, B.S.A., Instructor in Mechanics.
 J. C. Hooper, M. A., Instructor in Science.
 C. B. McLelland, B.Sc., Instructor in English and Mathematics.
 Miss M. Hayward, Instructor in Household Science.
 Miss G. Robertson, Instructor in Household Science.
 Miss A. McKenzie, Instructor in Home Nursing.
 H. S. Pearson, Instructor in Dairying.
 A. W. Foley, Instructor in Poultry.
 Dr. P. R. Talbot, Instructor in Veterinary Science.
 Miss L. Schoof, Stenographer.

Only one change has since been made in the staff. Mr. Robert Sinclair, B.S.A., was appointed Instructor in Animal Husbandry in place of Mr. H. W. Scott, who became district representative in the spring of 1918 for the Sedgewick District.

The following special lecturers gave instruction at the School during the spring of 1918:

Mr. H. A. Craig, Deputy Minister of Agriculture.
 Mr. Sydney Carlyle, Superintendent of Demonstration Farms.
 Mr. Alex. Galbraith, Superintendent of Fairs and Institutes.
 Mr. James McCaig, Editor of Publications.

CLOSING EXERCISES.

On March 28th, 1918, closing exercises were held. Mr. James McCaig and Miss Williams, who was acting Instructor while Miss Hayward was absent owing to illness, presented diplomas to the following students:

Diplomas in Practical Agriculture:

Wesley Smith	Cravath Corners
Hollis Bingham	Magrath
Ernest Buckingham	Claresholm
Francis McDonald	Vulcan
Nelson Fraser	High River
Enos Leitch	Alderson
Allan Harris	Retlaw
Andrew Olsen	Stavely

Diplomas in Household Science:

Ida Litchfield	Dinton
Emily Straughan	Parkland
Marjorie Shapley	Taber
Ruth Caldwell	Warner
DeWilla Little	Lomond

The following students completed the first year examinations as prescribed by the Department of Agriculture:

Boys:

Golden Alfred	Hill Spring
Harold Baker	Pincher Creek
Felix Birand	Taber
Grant Caldwell	Hill Spring
Walter Dersch	Macleod
Arthur Edwards	Medicine Hat
W. Enkla	Deering

Stanley Fenton	Richmond, Sask.
Alois Goodyear	Bow Island
John Gates	Retlaw
Robert Hendry	Bindloss
Carl Hild	Prosby
Paul Hinds	Whitla
Stanley Lamb	Claresholm
Lester Lybbert	Glenwoodville
Clarence Martin	DeWinton
Lloyd Miller	Del Bonita
John McKay	Waldo, B. C.
Magrath Merrill	Hill Spring
Lamont Ohlson	Millarville
John Peirce	Claresholm
Harold Pederson	Amethyst
Frank Smith	Milk River
Robert Thompson	Carmangay
William Watt	Longview
John Whitesel	New Dayton
Albert Olsen	Stavely

Girls:

Belle Bannen	Warner
Alma Bratton	Spring Point
Jerusha Campbell	Okotoks
Gertrude Honeysett	Coaldale
Hildegard Kuehn	Blakesville
Martha Lange	Grassy Lake
Ethel Matthews	Reid Hill
Josie Mosley	Claresholm
Edna McIntosh	High River
Ona Neff	High River
Dollie Smyth	Panoras

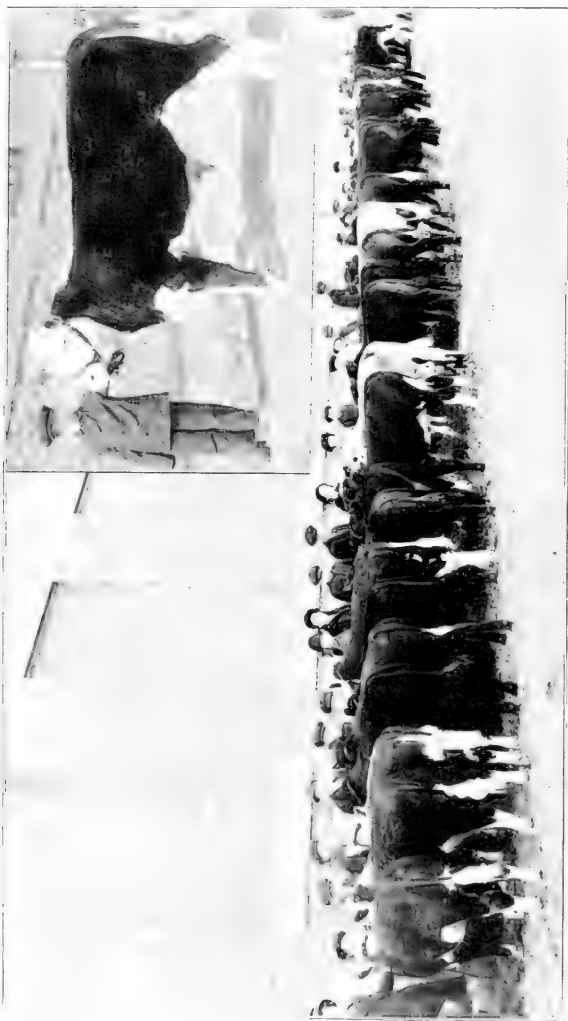
TWO YEARS' INSTRUCTION.

The course in the Schools of Agriculture extends over a period of two winters of five months each. The term commences about the first of November and ends the last of March of each year. Diplomas in Practical Agriculture are granted students who have successfully completed the two years' course in Agriculture, and diplomas in Household Science are granted students who have successfully completed the two years' course in Household Science. Students, who in the opinion of the examining board are eligible, are given admission to the University of Alberta where they may proceed either to the degree of Bachelor of Science of Agriculture or to a degree in Household Science. It requires three years at the University to complete these courses.

COURSES OF INSTRUCTION IN AGRICULTURE.

The School is well equipped for the practical teaching of agriculture. All instruction has a direct bearing on agricultural conditions in Southern Alberta. The following subjects are taught:

First Year.—Field Husbandry, Animal Husbandry, Blacksmithing, Carpentry, Concrete, Gas and Steam Engineering, Plumbing, Horseshoeing, Principles of the Automobile and repairing of same, Veterinary Science, Dairying, Poultry, Horticulture, Chemistry, Physics, Botany, Farm Book-keeping, English, Public Speaking, Mathematics, Killing and Curing Meat.



THE DAY OF THE BOYS AND GIRLS HAS ARRIVED.

Second Year.—The course for the second year is a continuation of the work of the first year, together with Soil Physics, Entomology, and Bacteriology.

COURSES IN INSTRUCTION IN HOUSEHOLD SCIENCE.

This course is primarily one of a thoroughly practical nature. It is intended to make efficient home-makers. The following is a list of the subjects taught:

First Year Girls.—Cooking, Sewing, Laundry, Household Administration, Physiology and Anatomy, Home Nursing, Sanitation, Foods, English, Mathematics, Horticulture, Farm Dairying, Poultry, Chemistry, Embroidery, Home Book-keeping.

Second Year Girls.—Cooking, Sewing, Household Administration, Hygiene, Home Nursing, Household Chemistry, English, Mathematics, Home Book-keeping, Horticulture, Farm Dairying, Poultry, Bacteriology, Embroidery.

THE EPIDEMIC.

Owing to the outbreak of Spanish Influenza it was not possible to hold classes during the academic year of 1918-19. Instead, the main building was converted into an emergency hospital, which cared for over two hundred patients. Miss Hayward and Miss Robertson both assisted in the hospital work.

EXPERIMENTAL WORK.

There are twenty acres adjacent to the School allotted to experimental work. On this land numerous experiments are conducted. The results obtained from such are used in the instruction given in the School and at various farmers' meetings. The following experiments were conducted during 1918:

Variety tests with grasses, alfalfas, clovers, fodder crops, root crops, potatoes, wheat, oats, barley, peas, millets, buckwheats, vegetables, small fruits, trees, shrubs and flowers.

Depths of plowing, depth of planting, dates of seeding, rates of seeding, spring vs. fall plowing, potato land for cereals, grasses and clovers, and other crops vs. corn land vs. summerfallow.

Harrowing growing cereal crops vs. not harrowing; use of sub-surface packer; use of surface packer; use of press drill and other kinds of drills.

Seed Production.—Alfalfa and sweet clover seed were produced. Experiments were conducted also with the production of cabbage, cauliflower, turnip, mangel, sugar beet and table beet seed.

Hot beds and cold frames are operated each spring.

Much work is done each year in the selection and improvement of varieties of cereals. Each spring, students who wish it are supplied at market prices with small quantities of specially selected strains of wheat, oats, barley and potatoes to plant on their own farms.

GAS TRACTOR COURSE.

A short course for farmers was given at the School on gas tractors from March 11th to 16th, 1918. This course was well attended and much appreciated by those taking it.

Our instructor in mechanics assisted at the I.H.C. course on tractors at Lethbridge from February 18th to 28th, 1918.

The school appreciates the co-operation it has received from the various engine and machine firms in the Province. Tractors and farm machinery are always willingly loaned by these firms for class demonstrations and for short courses. A number of excellent demonstrations in tractors was put on at the school by experts from the various firms during 1918.

INSTITUTES, SHORT COURSE SCHOOLS, JUDGING AT FAIRS.

The services of the staff were required frequently during the summer to judge at a number of Agricultural and School Fairs in the Province. Quite a large number of Institute meetings were addressed in Southern Alberta during 1918. Lecturers were supplied during the winter of 1918 to assist in the short course schools held at Raymond, Macleod and Carmangay. During the months of May, June, July and August, the instructors in Household Science put on Institute meetings for the Women's Institute Branch at different points in Alberta.

CO-OPERATION WITH THE DEMONSTRATION FARMS.

The school aims to co-operate with the demonstration farms in every possible way. Live stock is supplied by the farms for class-room work. Field experiments frequently are conducted on a larger scale on land provided by the farms, and during 1918 Mr. Qually assisted in the operation of the demonstration farm at Raymond.

AGRICULTURAL REPRESENTATIVE WORK.

During the spring and summer of 1918 the Claresholm School was headquarters for Mr. Tapp, who was District Representative for Claresholm, Macleod, Cardston and Pincher Creek. This work was supervised directly by Mr. A. E. Meyer, Superintendent of Agricultural Schools, Edmonton.

Mr. Qually was employed as agricultural representative for Little Bow, Lethbridge, Taber and Warner during the same period. His headquarters were Lethbridge.

The work of these representatives was primarily to increase production for 1918-19. At the outset farmers were aided in solving the labor problem by advising them where labor could be secured.

In many parts of Southern Alberta a shortage of seed was encountered during the spring of 1918. Information was given as to how and where to make application for seed, depending on whether farmers were in organized or unorganized districts or on patented or unpatented land.

Assistance was also given the Dominion Government in placing several thousand bushels of seed flax for fibre. The farmer contracted to return an equivalent amount of seed in the fall and to sell the flax grown at a fixed price.

Mr. Qually aided a large number of farmers in remedying tractor troubles. By so doing he assisted them to get their plowing, cultivation and seeding done in proper season. As a result of the agricultural representatives' work many more acres were brought under cultivation for the 1918 and 1919 crops.

Farmers and owners of land desiring to have their land plowed or broken frequently made application to the agricultural representatives for plowing outfits, which were kept closely in touch with.

During the feed shortage scare meetings were held by the agricultural representatives among the farmers, advising them how to go about to secure hay and pasture for their stock.

SCHOOL FAIRS.

Under the direction of the Provincial Department of Agriculture, and in co-operation with the Department of Education, Agricultural instruction was given to the boys and girls of twenty-five rural schools in the vicinity of Claresholm, Stavely, Parkland, Carmangay and Granum. Instruction was given by Mr. J. C. Hooper, of the School of Agriculture at Claresholm, in the raising of six kinds of vegetables, six kinds of annual flowers, making weed and insect collections and caring for colts and calves.

The girls of each school were encouraged to do certain work in cooking and in sewing. The seeds and material necessary in making the weed and insect collections were supplied by the Department of Agriculture and distributed by the School of Agriculture. The gardens were made by the boys and girls at their own homes and were inspected during the summer months.

The results of the boys' and girls' work were exhibited at the school fair held at the School of Agriculture, Claresholm, on September 6th, 1918. Many suitable prizes were awarded by the Department of Agriculture, the local business men and the T. Eaton Company. About twelve hundred people were present at the school fair to inspect the exhibits. The following is a brief report:

Number of exhibitors	290
Number of entries of garden products	985
Number of entries of live stock:	
Colts	2
Calves	4
Pens of chickens	40
Pens of pigs	28
Number of entries of grain:	
Sheaves	75
Threshed samples	50
Number of entries of Household Arts:	
Canning	30
Cooking	60
Butter	18
Sewing	60
Number of entries of insect collections	16
Number of entries of weed collections	14

BACTERIOLOGICAL WORK.

Cultures for the inoculation of different kinds of legume seed were grown at the Claresholm School of Agriculture and supplied to the farmers of Alberta, British Columbia and Saskatchewan. These cultures were sent out from the first of May until the end of June. Two hundred and sixty-seven cultures for the inoculation of alfalfa, field peas, alsike, sweet clover, red clover and white Dutch clover were supplied in 1918. The following is the record of these sent out:

Number of Alfalfa cultures	165
Number of Field Pea cultures	52
Number of Sweet Clover cultures	33
Number of Alsike cultures	7
Number of Red Clover cultures	5
Number of Crimson Clover cultures	3
Number of White Dutch Clover	2

IDENTIFICATION WORK.

During 1917 many farmers sent to the school specimens of weed seeds, plants and insects for identification. These were identified and methods of eradication and control were given.

METEOROLOGICAL RECORDS.

Records of rain, snow, miscellaneous phenomena, and extremes of temperature have been taken daily during 1918 at the School of Agriculture, Claresholm.

The moisture record for 1918 is as follows:

	Snow in inches.	Rain in inches.
January	5.00	..
February	5.25	..
March	5.00	..
April .....	.85	.50
May	2.01	1.075
June .....	...	1.215
July .....	...	.635
August .....	...	2.320
September .....	...	1.780
October .....	...	.805
November	2.50	..
December	3.50	..
	24.11	7.880

Total in terms of rain is 10.29 inches.

Temperature, 1918:

	Minimum.	Maximum.
January	-32	59
February	-39	51
March	-24	64
April	7	75
May	15	75
June	25.5	88.5
July	32.5	90
August	37	92.5
September	29.5	78
October	19	69.5
November	6	60
December	-8	49.5

SEED TESTING.

During the spring and fall of 1918 there were germinated at the school 186 samples of wheat, oats and barley. Farmers have begun to fully realize the value of this work and are being encouraged to send in for germination samples of grain intended to be used as seed.

BLACKLEG VACCINE.

In 1918 the School of Agriculture, Claresholm, distributed 1,500 doses of blackleg vaccine.

Respectfully submitted,

W. J. STEPHEN,

Principal.

OLDS SCHOOL OF AGRICULTURE

Olds, February 3, 1919.

DEAR SIR,—I beg to submit herewith the fifth Annual Report of the Olds School of Agriculture, covering the school year, together with a report of the extension and other work that has been undertaken by the Staff.

CHANGES IN STAFF.

Several changes were made in the School Staff in preparation for the 1918-19 School term. Mr. E. E. Brown, M.S., B.S.A., who taught the Animal Husbandry work during the 1917-18 term, resigned to enlist with the United States Army, and was succeeded by Mr. A. Blackstock, B.S.A., who for some years taught at the Manitoba Agricultural College.

Miss Mary Birkett resumed her work as Mrs. J. G. Taggart in the Household Science Department and Miss Eva Wade, a graduate of the Ontario Agricultural College, was engaged to take charge of the sewing, etc., in the same department. During the summer of 1918 Miss M. E. Storey, who had taught the cooking, etc., at Olds during the past winter, was granted a year's leave of absence in order that she might pursue advanced studies at the Chicago University.

With the above exceptions the Staff remained the same as in 1917-18. The 1918-19 staff is as follows:

W. J. Elliott, B.S.A., Principal.
J. G. Taggart, B.S.A., Instructor in Science.
G. R. Holston, B.Sc., Instructor in Mechanics.
A. Blackstock, B.S.A., Instructor in Animal Husbandry.
N. S. Smith, B.S.A., Instructor in Agronomy.
R. M. Scott, B.A., Instructor in English and Mathematics.
Mrs. J. G. Taggart, Instructor in Household Science.
Miss Eva Wade, Instructor in Household Science.

The School of Agriculture is very fortunate in being able to secure the services of experts, who are in charge of other branches for the Government. During the winter, when it might be said that the various

branches of the Government are running at slightly lower ebb, the heads of these branches have kindly consented to give a course of lectures in their respective fields. Those who have assisted the Schools of Agriculture in this respect are:

Dr. P. Talbot, Instructor in Veterinary Science.
 Mr. A. Galbraith, Superintendent Farmers' Institutes.
 Mr. A. W. Foley, Superintendent Poultry.
 Miss A. McKenzie, Instructor in Nursing.
 H. S. Pearson, Instructor in Dairying.
 W. J. Beckett, Assistant Instructor in Dairying.
 Wm. Grant, Instructor in Blacksmithing.

THE SCHOOL YEAR.

In spite of the fact that the most disastrous war that has ever visited the world has been raging in Europe the school attendance has kept up each year almost to capacity, although the average age of the students has declined from year to year. When the school opened its doors in the fall of 1913 the average age of the students enrolling was close to twenty-two. Four years of war has reduced this average to between seventeen and eighteen. A feeling seems to prevail among the farming communities that with the older boys gone across the sea the farmwork would have to fall on younger shoulders, therefore, it was necessary to train youths who had to assume such heavy responsibilities in the best way possible. Hence, as reported above, the school has been full every year in spite of the war.

The prospect for the 1918-19 students at the Olds School of Agriculture was no exception to the rule. Had not the influenza interfered with the opening of the school, the indications were that we would likely have registered about one hundred students during the past winter. As a matter of fact twenty-three girls had registered for First Year Household Science work, and forty-eight boys for the First Year Agricultural Course. These, with the returning Second Year students would have given us nearly one hundred students in all.

LAST YEAR'S GRADUATING CLASS.

In spite of the war the 1917-18 graduating class was the largest in the history of the Olds School of Agriculture. In all seventeen girls received diplomas in Household Science, and twenty boys diplomas in Agriculture:

The graduates were as follows:

Girls Receiving Diplomas in Household Science.

Brown, Lucy	Innisfail
Downey, Emma	Ethelton
Scott, Gladys	Killam
Fletcher, Agnes	Delia
Hutchings, Marion	Calgary
Hammer, Nettie	Olds
Jacobson, Freda	Lacombe
Parker, Azalia	Brant
Patterson, Zella	Olds
Plummer, Alice	Chumv
Rodbourne, Alice	Crowfoot
Rodbourne, Charlotte	Crowfoot
Robinson, Lorea	Oyen

Sargent, Florence	Bawlf
Whiteside, Ethel	Zenith
Whiteside, Louise	Zenith
Waterson, Edith C.	Wetaskiwin
Waldron, A. M.	Clive

Boys Receiving Diplomas in Agriculture.

Baird, Ralph	Strathmore
Coonfer, W. A.	Langdon
Dahl, C. P.	Standard
Doughty, J. L.	Nevis
Haines, Norman	Strathmore
Hutchings, S.	Calgary
Murphy, Chas. D.	Youngstown
Mather, Thos.	Stammore
McDonald, W. D.	Grainger
Phillips, Duane	Carseland
Robinson, S. C.	Youngstown
Ray, Lloyd	Carstairs
Seymour, Alvin	Donalda
Shott, Bernard	Youngstown
Siegrist, Howard	Mellon
Wilson, William	Milnerton
Wood, Ray	Carstairs
Weir, A. C.	Lougheed
Elvidge, Alfred	Edmonton
Law, James	Edmonton

INFLUENZA EPIDEMIC.

Like all other institutions the Olds School of Agriculture has suffered from the influenza epidemic. The school and staff were all ready for the usual large enrolment, which was indicated by the actual applications from many students, but the influenza made it impossible to do anything in the way of instruction. The disease appeared in the Olds district a few days prior to that set for the opening of the school, and word was sent out to all students postponing the opening for a few weeks. Later, as the disease spread more widely, the opening was postponed until January 3d, but when that date arrived the disease, although it had apparently spent its force in the immediate town, was still raging in the country districts. The Board of Agricultural Education very reluctantly decided that it would be unwise to open the School at all. This was a very serious blow to the staff and prospective students, and constitutes the first interruption of the school work since the opening of the doors in 1913.

THE STAFF BUSY.

As soon as the influenza epidemic broke out in the Olds district, the school kitchen was organized for community work, and the entire school staff volunteered for relief work. At first invalid foods were prepared by the Domestic Science staff under the doctor's orders. Various members of the school staff, with the school cars, distributed this material for a distance of from fifteen to twenty-five miles surrounding the school. The epidemic spread so rapidly that the organization could not keep pace with the work by this means, so that on November 8th, the School of Agriculture was opened as a hospital to receive influenza patients.

Dr. Kenny, J. G. Taggart and W. J. Elliott were appointed a special committee to handle the situation in the district. When the epidemic had subsided it was found that a total of one hundred and forty-four influenza patients had received treatment in the School of Agriculture. These patients represented 1,348 hospital days. The greatest number of patients in the building at one time was during the week beginning December 16th when seventy-one were being cared for.

The school staff took entire charge of the kitchen; the securing of supplies; the securing of beds and bedding; the bringing in and taking home of patients.

OLDS STUDENTS AND THE GREAT WAR.

The good record made by the students of the Olds School of Agriculture in enlistment for service at the front is a thing that will ever bring credit to the student body and to the School of Agriculture itself. The great majority of the boys whose names appear below have seen actual service at the front, and, so far as can be learned nine of our students have paid the supreme price in France. We are giving the following list in as complete form as possible. There may be other boys who have been wounded or who may have been killed in action, but the particulars have not yet been received.

OLDS HONOR ROLL.

KILLED IN ACTION:

Pte. Raoul Simon, Trochu (Class 14), killed in Champagne.
 Pte. Doan Quantz, Penhold (Class 15), killed in France.
 Pte. Jno. Hutchinson, Olds (Class 16), killed in France.
 Pte. Horace Gallagher, Calgary (Class 14), killed in France.
 Pte. Arthur McAllister, Penhold (Class 14), killed in France.
 Pte. Wm. Rodgers, Penhold (Class 14), killed in France.
 Pte. John McRae, Delburne (Class 16), 17th Can. Reserve.
 Pte. W. A. Bicknell, Didsbury (Class 15), 137th Batt.
 Pte. Jack Peckham, Olds (Class 16), Cycle Corps.

WOUNDED OR GASED IN ACTION:

Lieut. Roy Burns, Ponoka (Class 14), 31st Battalion.
 Pte. Wm. Whiteside, Penhold (Class 14), 12th O.M.R. Invalided Home.
 Pte. Angus McNeil, Chesley, Ont. (Class 15), 66th Battalion.
 Lance Corporal J. A. Goldie, Olds (Class 15), 3rd Pioneer Battalion.
 Pte. Herbert Batley, Olds (Class 15), 56th Battalion.
 Pte. Otto Miller, Olds (Class 15), 138th Battalion. Invalided Home.
 Sgt. Harold Thornton, Red Deer (Class 15), 187th Battalion.
 Pte. Richard Reddon, Olds (Class 15), 187th Battalion.
 Pte. Robert Hutchings, Olds (Class 16), 187th Battalion.
 Pte. Otto Jensen, Olds (Class 16), 158th Battalion.
 Pte. B. E. Hammond, Calgary (Class 15), Cycle Corps.
 Pte. Arthur Kemp, Calgary (Class 16), 196th University Battalion.

AT OR ON THEIR WAY TO THE FRONT.

Mr. Brown, Animal Husbandry Instructor U. S. Artillery.
 Capt. (Science Instructor), Army Medical Corps.
 Pte. R. Georges Figarol (Class 14), Leo, Alta., 26th Dragoons.
 Pte. M. Moen, Stirling, Scotland (Class 15), 51st Battalion.
 Pte. G. A. Whiteside, Zenith (Class 15), 51st Battalion.
 Pte. Wm. Black, Hope Valley, (Class 16), D. of C.R.C. Hospital.
 Pte. Mack B. McColl, Colborne (Class 15), 175th Battalion.
 Pte. E. Huskins, Piteox (Class 16), 187th Battalion.

Pte. A. Campbell, Bawlf (Class 14), 187th Battalion.
 Pte. Milo Huffman, Langdon (Class 16), 187th Battalion.
 Pte. Ed. Farquharson, Eye Hill (Class 16), Cycle Corps.
 Pte. Campbell Lindsay, Eye Hill (Class 16), Cyclist Corps.
 Pte. Edward Gibb, Munson (Class 16), 191st Battalion.
 Pte. Osmond Ennis, Alix (Class 16), 191st Battalion.
 Pte. Thory Johnson, Innisfail (Class 14), 1st Canadian Division.
 Pte. Leonard Blois, Sheerness (Class 15), 202nd Battalion.
 Pte. Donald Black, Calgary (Class 15), Artillery Section.
 Pte. Thos. Wilkerson, Leduc (Class 14), 202nd Battalion.
 Pte. Harold Hopkins, Bentley (Class 16), in the navy.
 Pte. P. H. Menzies, Chilliwack, B.C. (Class 15), 237th Battalion.
 Pte. Lyle Russell, Ponoka (Class 16), Aviation Corps.
 Pte. Lloyd Danford, Ponoka (Class 15), Aviation Corps.
 Flight-Lieut. Geo. Gorman, Calgary (Class 16), Aviation Corps, Eng.
 Pte. Frank Cosgrove, Gleichen (Class 16), Aviation Corps, Toronto.
 Pte. Ralph Baird, Strathmore (Class 18), U. S. Infantry.
 Pte. James Williams, Ensign (Class 17), B. Co., 69th Battalion.
 Pte. John Rennie, Didsbury (Class 17), B Co., 69th Battalion.
 Pte. S. J. Crozier, Richdale (Class 17), C Co., 69th Battalion.
 Pte. Albert Malcolm, Innisfail (Class 17), B Co., 69th Battalion.
 Pte. H. H. Phillips, Langdon (Class 16), 1st Depot Battalion.
 Pte. Arthur Carmode, Acme (Class 16), A Co., 69th Battalion.
 Pte. Albert Wiancko, Earlville (Class 16), 1st Depot Battalion.
 Pte. Geo. Murray, Killam (Class 16), B Co., 69th Battalion.
 Pte. Arden Deadrick, Didsbury (Class 16), C Co., 69th Battalion.
 Pte. Thos. Mather, Strathmore (Class 18), C Co., 69th Battalion.
 Pte. W. G. Thurston, Milnerton (Class 16), C Co., 69th Battalion.
 Pte. James Anderson, Wetaskiwin (Class 17), Co. 6, 1st Depot Battalion.
 Pte. Hugh Carson, (Class 15), Ont.
 Pte. James Meeres, Wimburne (Class 16), C Co., 69th Battalion.
 Pte. Vernon Carter, Brant (Class 17), Canadian Engineers.
 Pte. Fred Dundas, Sunnyslope (Class 18), 21st Reserve, 1st Depot Batt.
 Pte. Armun Johannesson, Burnt Lake (Class 15).
 Pte. Enir Stephenson, Burnt Lake (Class 15).
 Pte. Chris. Dahl, Standard (Class 17).
 Pte. Howard McDonald, Grainger (Class 17), U. S. Marines.
 Pte. Wm. Coonfer, Langdon (Class 18).
 Pte. Elmer Redick, Monitor (Class 18).
 Pte. Chris. Hanson, Eckville (Class 16), 62nd Infantry, Calif.
 Pte. Harry Cross, Wiste (Class 18).
 Pte. Frank Stevenette, Penhold (Class 15).
 Pte. Allen Crawford, Ponoka (Class 16).
 Pte. Alex. Ellis, Lacombe (Class 16).
 Pte. Harry Switzer, Lacombe (Class 17).
 Pte. Harold Stewart, Merna (Class 16).
 Pte. W. D. McDonald, Grainger (Class 18), Aviation Corps.
 Pte. Ernest Madsen, Olds (Class 17).
 Pte. Jos. Marsden, Excel (Class 17).
 Pte. Howard Siegrist, Mellon (Class 18).
 Pte. Alex. Chubertson, Bassano (Class 17).
 Pte. Cecil Hutchinson, Ponoka (Class 17).
 Pte. Wm. Jacobson, Stettler (Class 17).
 Pte. Geo. Malcolm, Innisfail (Class 17).
 Pte. Raymond Keer, Elkton (Class 18).
 Pte. Lloyd Ray, Didsbury (Class 17).
 Pte. Geoffrey Smith, Olds (Class 15).

EXPERIMENTAL WORK.

As a complete report, giving the experimental work carried on at this school during last summer has already been sent to the Superintendent of the Schools of Agriculture, it will not be necessary to enlarge upon that work here, except to say that the work with grain and grass varieties, also cultivation methods, and garden test work was continued.

JUDGING AT FAIRS.

Members of the school staff were used from time to time judging grain and stock at fairs in the Province. The principal judged the hogs at both the Edmonton Fairs. This is excellent work for the instructors and keeps them in touch with actual conditions throughout the Province.

EXTENSION WORK.

During the Summer of 1918 Mr. J. G. Taggart, Mr. R. M. Scott, and Mr. Geo. Holeton of the school staff were used in the Greater Production Work under the Superintendent of the Schools of Agriculture. This work was required owing to the necessities of the war, and, no doubt, will be reported upon more fully elsewhere.

PIG CLUBS.

During 1918 the Deputy Minister instructed the writer to take in hand the organization of pig clubs throughout the Province. Organization meetings were held at thirteen different points and as a rule two small registered sows were distributed to each boy and girl. The local bank at each point furnished the money for the purchase of the pigs. The boy or girl could raise both pigs or sell one before farrowing time as he or she might desire. The latter plan is perhaps the safest one, inasmuch as a registered sow ought to bring sufficient money at that time to clear off the note and interest at the bank, and the boy or girl would have a sow of his or her own that has only cost the care and feed. The boy or girl is thus in a position to supply any market that might develop with weanling registered pigs or they may fatten the litter with the aid of pasture and do very well.

The clubs organized, the members in each and the manager and bank interested, are herewith given:

PIG CLUBS ORGANIZED IN THE PROVINCE, 1918.

Town	No. of members	Manager	Bank Interested
Vermilion	66	Mr. Reynolds	Bank of Commerce
Camrose	15	Mr. Saunders	City of Camrose
Red Deer	33	Mr. F. C. Whithouse	Bank of Commerce
Eckville	17	Mr. McIntosh	Bank of Commerce
Crossfield	19	Mr. Bray	Bank of Commerce
Warner	11	Mr. J. W. Gordon	Bank of Commerce
Charlestown	15	Mr. Walker	Bank of Commerce
Aene	3	Mr. J. G. Lafrance	Merchants Bank
Provost	30	Mr. Orr	Bank of Commerce
Staveland	6	Mr. Oats	Bank of Commerce
High River	15	Mr. W. D. Elliott	Bank of Commerce
Vulcan	13	Mr. Gordon	Bank of Commerce
*Stony Plain	8	Mr. Lewis	Bank of Commerce
*Granum	..	Mr. West	Bank of Commerce
*Olds	8	Mr. R. N. Aylward	Bank of Commerce

Total members . . . 255

Some of the members only took a single sow. In all some five hundred pigs were distributed to the various members.

*The Stony Plain, Granum and Olds Clubs were organized during the year 1917. The membership indicated in these cases applies only to the new members added during 1918.

SCHOOL FAIRS.

As the Principal at Olds was busy over the Province in the organization of pig clubs the school fairs were handed over to Mr. N. S. Smith. Four very successful Fairs were held at Olds, Trochu, Bowden and Sundre. The same interest and enthusiasm were shown by the boys and girls and their parents as in former years. At Olds the fair was held in conjunction with the regular district fair on the grounds of the School of Agriculture. Some sixty individual schools competed at the four fairs. This represented approximately one thousand boys and girls who made exhibits. It is interesting to note the increased attention given to this work from year to year.

EXPERIMENTAL UNION.

Last spring an effort was made to link up the students of the School of Agriculture with the ex-students in an organization known as the Students' Union. Definite plans were laid down for co-operative experimental work during the summer months and much of this work was undertaken. The drought, however, interfered with many of the plans, and the prevalence of the influenza has made it impossible to hold a meeting so far this year. It is hoped that an opportunity may present itself before the spring work is undertaken to call the members together. We believe that much good may be accomplished through an organization of this kind and hope to see the experimental work enlarged upon.

CORRESPONDENCE.

The correspondence in connection with the office keeps up to a high average. Considerable of this correspondence is with reference to the routine of school work and school activities, but there is a growing correspondence in all branches with respect to agricultural problems of various kinds. It is felt that this is an important field of usefulness for the school and it is given careful attention. The following will give an exact record of the correspondence by years since the school opened in 1913:

CORRESPONDENCE FOR THE OLDS SCHOOL OF AGRICULTURE.

June 21st, 1913, to June 30th, 1914	3,793 letters
June 30th, 1914, to June 30th, 1915	2,649 "
June 30th, 1915, to June 30th, 1916	2,221 "
June 30th, 1916, to June 30th, 1917	3,055 "
June 30th, 1917, to June 30th, 1918	2,688 "
June 30th, 1918, to Jan. 31st, 1919 (7 months)	884 "
Average, per year	2,881 "

This does not include articles for papers, circulars, pamphlets, etc., that have been sent out as advertising material to newspapers, students, and others.

SCHOOL BUILDING USED.

Aside from time required for school work the School of Agriculture has been used regularly by the municipal council, the U.F.A., and the Women's Institute. During the influenza epidemic it made an ideal hospital, as it was already equipped with a laundry, kitchen, and full com-

plement of dishes. Many are the expressions of appreciation on the part of the people of the district, as well as the patients who occupied the building, for the service the School of Agriculture was able to render to the community during the trying influenza epidemic.

I am, your obedient servant,

W. J. ELLIOTT.

Principal, School of Agriculture.

VERMILION SCHOOL OF AGRICULTURE

SIR.—I beg to submit herewith the report of the Vermilion School of Agriculture for the year 1918. It covers work done in the sixth year of the school's operation.

Owing to the severe epidemic of Spanish Influenza in Northern Alberta in the months of October, November and December it was decided by the Board of Agricultural Education to keep the Vermilion School of Agriculture closed for the school year 1918-19. This made it necessary to cut down the staff and cancel teaching operations for the year. The school had a list of sixty-six applications from girls and boys. The following were the instructors with the departments administered by each:

E. S. Grisdale, B.S.A., Principal and Instructor in Agronomy and Horticulture.

E. S. Hopkins, B.S.A., M.S., Instructor in Elementary Science and Farm Management.

H. E. Wood, B.S.A., Instructor in Animal Husbandry.

S. D. Snyder, B.Sc., Instructor in Farm Mechanics.

J. J. Loughlin, Instructor in English and Mathematics.

Miss A. M. Lavallee, Instructor in Household Science.

Miss Olive G. Lawson, Instructor in Household Science.

Shortly after the ruling of the Board of Agricultural Education to the effect that the school was not to conduct regular classes the following changes in the staff took place: Mr. E. S. Hopkins was transferred to Olds to take charge of research work in soils, Mr. H. E. Wood left to take up work with the Manitoba Dept. of Agriculture, Mr. J. J. Loughlin engaged with the Vermilion High School staff and Miss A. M. Lavallee transferred to the Women's Institutes Branch, Dept. of Agriculture, Edmonton, Alta.

CLOSING EXERCISES.

At the closing exercises in March Mr. John Blue, Provincial Librarian, Edmonton, conferred diplomas on the following students:

Agricultural Students.

A. P. Hunter	Imnissfree, Alta.
Chas. Lewis	Bon Accord, Alta.
C. B. A. A. A.	Pigeon Prairie, Alta.
Sydney Parr	Lloydminster, Alta.
L. J. Taverner	Sedgewick, Alta.
O. Young	Chailey, Alta.
A. S. Wain	Clifton, Alta.

Household Science Students.

Miss J. Cairns	Islay, Alta.
Miss Jessie Goodall	Ryley, Alta.
Miss L. Gray	Tofield, Alta.
Miss I. Kehoe	Vermilion, Alta.
Miss L. Lewis	Bon Accord, Alta.
Miss H. Mead	Vermilion, Alta.
Miss H. Moen	Tofield, Alta.
Miss M. Nixon	Vermilion, Alta.
Miss L. Richardson	Vegreville, Alta.
Miss B. Stewart	Edmonton, Alta.

TWO YEARS' INSTRUCTION.

The course in the School of Agriculture consists of two terms of five months each. The first term begins about the first of November and ends the last of March. Those students successful in passing the examinations at the end of the first year are allowed to enter the second year of the course. At the end of the second year a final examination is given. A diploma is granted to all those who pass this final examination. In addition to this all those who, in the opinion of the examining board, are eligible are given entrance standing to the University of Alberta. The course in Agriculture at the University covers three years and if successfully concluded commands the degree of Bachelor of Science of Agriculture. A similar arrangement is being made for the Domestic Science students.

COURSES IN AGRICULTURE.

All the instruction in the Vermilion School of Agriculture is made to bear on the practical side of farming. The school has an excellent equipment in all departments. It is a matter of considerable satisfaction to the instructors in the various departments to realize that each year the courses in the various schools are becoming more valuable to the students; more valuable because the experience of the work in previous years is used in working out the course of study for the year in question. The useful material is retained and the less valuable parts are discarded to give place to material which is considered to be more serviceable. The course of study is as follows:

Soils and soil cultivation, judging, feeding and care of live stock, the identification and eradication of weeds, judging and grading seed grain, selection of seed grain, rotation of crops, veterinary science, carpentry, blacksmithing, farm machinery, cement work, gasoline engines, road building, growing of small fruits, vegetables, trees and shrubs, killing, cutting up and curing meats, farm management and elementary courses in mathematics, bookkeeping, chemistry, physics, English, public speaking and reading. In the poultry and dairy departments useful lines of practical work have been introduced and have proven to be very popular. In poultry, crate feeding, killing and marketing of chickens was again undertaken with the first year and the care and management of a farm flock of hens for winter egg production was carried on a third time by the second year. Both of these ventures covering two years have proven interesting and highly instructive. In dairying, instruction is given in cheesemaking, milk production, milk testing, buttermaking, care of the separator, etc.

DOMESTIC SCIENCE COURSE.

The home-makers' course is primarily one of a very practical nature. It is intended to make the girls who take it efficient home-makers. It includes enough theory to make the practical side truly valuable. In this course, sewing, cooking, home nursing, laundering, household administration, physiology, hygiene, sanitation, foods, household book-keeping, dairying, poultry, horticulture, physical culture and courses in elementary English, mathematics, chemistry and physics are taught.

STUDENT ORGANIZATIONS.

In addition to the purely academic work the students have various organizations. They are:

(a) The Student Self-governing Organization. This organization makes the matter of discipline at the School of Agriculture of very little worry to the principal and at the same time is satisfactory and adds to the success of the Institution.

(b) The Literary Society, which holds weekly meetings, is given over to a programme of debates, spelling matches or some kind of other entertainment in the assembly hall of the school. Open debates are held once a month and it is very gratifying to note the benefit derived by most of the students from the meetings, especially in the matter of being able to stand naturally and express themselves properly to an audience.

(c) The Athletic Association is active and has arranged for various kinds of exercise. There is a good open air rink at the School and we have skating and hockey games almost every day of the week, in spare hours, at noons and also in the evenings.

(d) The Y.M.C.A. did some valuable service to the students in the school. The Association meets every Thursday afternoon. A speaker is supplied for each meeting. At the end of each address the students are given opportunity for open discussion of the subject in question.

EXPERIMENTAL WORK.

There are twenty acres of land adjacent to the school allotted for experimental work. On this land various experiments are conducted. The results obtained from these are used in the instruction given in the school and at various farmers' meetings. The following experiments are conducted each year with cereals, forage, grass, root and vegetable crops:

1. Variety tests.
2. Rates, dates and depths of sowing.
3. Seed Selection.
4. Cultural Experiments.

In addition to the above we are conducting experiments with the fall wheat:

1. Testing out varieties of fruits, trees, shrubs and flowers and methods of caring for same.
2. Greenhouse experiments.
3. Seeding to grasses and clover with and without a nurse crop.
4. Plant selection.
5. Subsoiling.
6. Raising root seed.

SCHOOL OPEN TO THE PUBLIC.

The School of Agriculture at Vermilion is open to the public from 7:00 a.m. to 6:00 p.m. every day except Sunday. There are a good many visitors received at the school at all seasons of the year. These people either come to see the building and equipment or to get information on some phase of farming. The school is used to some extent for institute meetings and patriotic functions of different kinds.

ALUMNI.

The alumni have been organized for over two years. The second students' re-union was held at Vermilion on March 2, 1918. The attendance this year was extremely good, students from '17, '16, '15 and '14 classes were present. The objects of the association are to keep in touch with the graduates and to assist each member to keep enlightened on any advance made along the lines of agricultural work. It is proposed to accomplish this end by having as speakers at each alumni meeting leading agriculturists. If an attractive programme is arranged for each meeting and it is properly advertised there will be no difficulty in getting a good turn out to hear the speakers and benefit by their message.

MAGAZINE.

Again this year the students of the Vermilion School of Agriculture assisted in editing the A.S.A. Magazine. This magazine is prepared by the joint student body of the three schools of agriculture and the activities of the students in all three schools are dealt with.

CORRESPONDENCE.

The following number of letters have been mailed from the Vermilion School of Agriculture during the past five years:

1914, 1872; 1915, 2847; 1916, 2759; 1917, 3301; 1918, 3503. Total 14,282. Average per year, 2856.4.

SEED TESTING.

The seed testing work at the Vermilion School of Agriculture is growing heavier each year. This winter one man has to devote his entire time to the work. It is felt that this is a very important line of work and for that reason careful attention is devoted to it. The germination equipment is not elaborate enough for the work at this station and we must have it enlarged either by the purchase of more germinators or by the construction of a special germinating room. Since the germination test is important in determining the value of seeds for sowing and since hundreds of farmers are asking for it an additional expenditure for more equipment is justifiable. The tests are all done in duplicate, one hundred seeds used in each. The first count is made in five days and the second in ten days after placing the tests in the germinator. Sometimes owing to the consignor failing to properly mark the samples sent in, a considerable amount of trouble is experienced in reporting on the test. In sending samples for a germination test the name and address of the sender should be marked on each lot. Further each sample should be numbered or specifically marked in some way. A two-ounce sample of the larger grains and smaller quantities of the small seeds are required.

VACCINE.

In 1918 the Vermilion School of Agriculture distributed 6,580 doses of Dominion Government blackleg vaccine as compared with 8,380 doses in 1917. This vaccine does not seem to give the best satisfaction and for that reason it is probable that no more will be distributed from this point. Should it be decided to discontinue its distribution some other vaccine will be handled in its place.

EXTENSION WORK.

The work of the staff connected with the Vermilion School of Agriculture is broadly speaking divided into two parts, that of instructing during the five winter months, and extension work, with the students and farmers during the remaining part of the year. This extension work embraces many phases of Agriculture. The Animal Husbandry Instructor is available to farmers for consultation on live stock problems. The mechanics' instructor gives valuable information and advice on building plans, engines, blacksmithing and carpentry. The Science Instructor is used by the public in various ways. For instance, he is ready to assist them in soil and crop problems. The Agronomist conducts considerable extension work with the farmers and students in the district which is served by the school. He co-operates with them in testing out varieties of grain, grasses, clovers and cultural methods of one kind or another. This is work that is generally undertaken by an experimental union and in the near future it is planned to organize such an association and include this and similar co-operative work.

Judges are supplied to a large number of fairs, institute meetings are addressed, good farming competitions judged and grain crops inspected for the Canadian Seed Growers' Association.

Owing to the ruling of the Canadian Railway Board against special trains the publicity afforded by the mixed farming special train and the excursion to the Vermilion School of Agriculture was very much missed this past year.

SCHOOL FAIR WORK.

For the third year as an additional part of our extension work a rural school fair was held. Mr. J. J. Loughlin was directly responsible for the work. The object in holding the school fair is to interest in agriculture many children of school age within a radius of thirty miles of Vermilion and to provide a means of getting in touch with the young people who may be induced to take, at some later date, one of the courses offered at the School of Agriculture.

The work was commenced shortly after the Agricultural School courses ended and all schools were visited within a thirty-mile radius. Valuable assistance was rendered by School Inspector R. H. Roberts.

At each school a brief explanation of the work and the rules as well as directions for preparation of the soil were given.

Each boy had the choice of four varieties of vegetable seeds as well as being allotted a four-pound sack of potatoes. The girls were given the same choice together with flower seed. Besides these, they were

supplied with cards and material to be used for the mounting of weeds and insects.

There were 740 pupils enrolled at the forty-four schools and the free distribution of seeds, flowers, and potatoes were as follows:

350	packages of each variety of flower seed including Sweet Peas, Candytuft, Alyssum, Coreopsis and Aster.
575	packages of beets.
575	packages of carrots.
300	packages of parsnips.
474	packages of turnips.
275	packages of mangolds.
475	packages of peas.
325	packages of potatoes (4 lb. packages).

The seeds were given to the pupils, who were expected to make an honest effort to do good work, i.e. that they look after them during the summer and then in the fall exhibit samples of their produce at the School Fair, where the best exhibits were awarded prizes.

In the months of July and August each pupil's home was visited and his garden plot inspected. This necessitated travelling over two thousand miles. It is doubtful if this method of supervision is necessary and a more labor-saving plan will be introduced in the near future.

Inspection has been made for the purpose of giving advice on the care of the garden and the preparation of exhibits for the fair. It is very possible that the pupils can be enlightened on these points in fully as efficient a manner with a system which will mean less cost.

In addition to the agricultural work there are the Household Science classes in the School Fair prize list. These were also explained and seemed to have equally as great interest for the pupils as the other. The materials from this branch of the work were also exhibited at the fair. They consisted of cooking, articles of sewing, knitting and darning. The Household Science work was not directed by one of our Domestic Science instructors and for that reason the exhibits were not as good as a year ago.

Besides the work at this centre similar work was organized for the Lloydminster district which was supervised by the staff of the Public Schools, Lloydminster. They took an active part in getting the work under way and in distributing seeds. However, Mr. C. D. McInnes, the principal of the school was called to the colours in the early summer. As a result of this together with the fact that the gardens were greatly damaged by frost and drought the work received poor supervision and very little encouragement from the local centre. This led to the cancelling of the fair.

The Vermilion School Fair was held as usual with the Agricultural Society Fair, Vermilion, on Sept. 12th. The Agricultural Society made the School Fair a grant of \$200.00 for prize money. The generosity of the society in this connection is very much appreciated. The holding of the Agricultural Society Fair and the School Fair on the same grounds at the same time has many things in its favor. It not only creates a good impression with the Agricultural Society but also means that a greater number of people turn out to see both fairs resulting in mutual benefit from both a financial and educational standpoint. The exhibits were

housed in a tent belonging to the Department and it was pitched near the main Agricultural building.

The entries at the fair totalled 1,303. These entries were made by 331 exhibitors. Forty out of the forty-four schools visited exhibited at the fair.

The School Fair was visited by three thousand people.

The season of 1918 was one of the worst the district had experienced. Frost had been recorded every month throughout the summer. In spite of this severe unseasonable frost and the dry weather the exhibits of grains, grasses and vegetables were exceptionally heavy and of very good quality.

Judges were supplied by the Department of Agriculture.

DISTRICT AGENT WORK IN ST. PAUL, ALEXANDRA AND VERMILION DISTRICTS.

The Department of Agriculture was represented by S. D. Snyder of the Vermilion School of Agriculture. The work was carried on during the months of April, May, June and July.

During the early part of the season assistance was given mainly to those farmers who were having difficulty in securing good seed. Those farmers who were desirous of leasing more land were put in touch with those having land to lease. This aided many farmers; who would otherwise have experienced great difficulty in securing good seed and more land to crop.

Farmers who had patented land were able to get credit through the municipalities, (if they were experiencing financial difficulties). Those on homesteads or unpatented lands were able to secure credit for seed through the Dominion Government, and those on leased lands were able to get credit through their landlords, and thus all were enabled to avail themselves of good seed.

Considerable aid was given during this period and later in supplying through the Department's Labor Bureau the demand for labor. When an application was made to the representative for labourers, the labor office was communicated with over the telephone and usually the desired help could be secured within forty-eight hours of the time the application was received. One difficulty experienced here was that labor in other districts was receiving higher wages than this district seemed able to pay.

In May and early June, assistance was given in getting breaking done, with the result that those who were desirous of aid and could be aided, were assisted in getting breaking done.

Tractor owners were given help where difficulty was experienced in operation and repairs.

In July stockmen were aided in locating hay. This district was fortunate in having a considerable surplus of green feed (due to the early frost in July) in addition to the native hay.

GIRLS' CLUBS.

In the season of 1917 five girls' clubs were organized in the Vermilion District. The rule in selecting districts for clubs was to have at least six girls above the age of eight and to take in girls in the 'teen age who lived in the district and were not enrolled at the school.

During the season the clubs were organized all were quite active and met once a week not only for the purpose of receiving instruction in sewing, cooking and canning but also for the social effect and for doing Red Cross sewing and planning other ways to assist in raising money for patriotic purposes. This past year, however, the work of most of the clubs has been less active, owing chiefly to the fact that there was no Domestic Science Instructor to assist and encourage it. This is a good work and it provides a means for placing the School in touch with young people who wish to attend its courses.

BOYS' AND GIRLS' PIG CLUB.

For the past year or two it was felt that the formation of a boys and girls' pig club was advisable. Upon suggestions from the Manager of the Canadian Bank of Commerce and Mr. W. J. Elliott of Olds an organization meeting was held in the School of Agriculture on April 26, 1918. The meeting was well advertised through the press and by letters and was attended by two hundred and fifty enthusiastic boys and girls. Mr. Elliott who was in charge of the pig club work for the Province was present and gave a very interesting address on the aims, objects, rules and regulations of the club.

At the meeting some seventy girls and boys joined the Pig Club. The rules of the club as stated at this meeting was to confine the work to pedigree stock, to allow each boy or girl to purchase one or two sows of any breed of swine and to borrow the money at the bank. The latter is for the purpose of acquainting the boy or girl with banking business and for the very important point of having the child actually own the animal. The money is advanced on the child's own note. The Club with A. J. Reynolds, Manager of the Bank of Commerce, Vermilion, as manager and secretary took orders for and distributed the following number of young sows:

No. of Pigs.	Breed.
41	Yorkshires.
36	Berkshires.
13	Duroc Jerseys.
4	Poland Chinas.
2	Hampshires.

Total.....96

The sows were placed with the children at a cost of slightly under \$19.00 per head. The pigs were selected and bought by Mr. Elliott.

All boys and girls were to feed and care for their animals.

An insurance charge of \$1.00 per pig to cover loss by death was provided for by adding the amount of the fee to each child's note. Any amount of the insurance fund not required for 1918 will be carried into 1919 for the same purpose. Prentice Jacklin lost both his pigs shortly

after they were purchased, through an accident with gopher poison. His father, however, made arrangements that enabled him to secure a second pair. The pigs were all registered in the names of the respective boys or girls.

The bank is very moderate in its demands for repayment of the notes held against the children. At first the notes were made out for six months. After this they were extended for another six months' period.

The majority of these sows have been bred to good males and it is the intention to have them raise litters of pigs next spring.

In the fall at the School Fair classes were provided for the pig club competition. The showing made by the pigs in this competition was very good. There were fifty-four entries and without exception the quality was excellent.

The work of the Vermilion Boys' and Girls' Pig Club has progressed favourably to date. The majority of the people seem to be satisfied with the scheme. It is evident to the School of Agriculture that this work might be carried too far. For the next few months market conditions are likely to be very unstable. Since the hog market is especially subject to sudden changes it may result in making the people somewhat lukewarm in their endeavours with swine of any description. However, it would be much safer to encourage the use of grade rather than pedigreed pigs for pig club work except in special cases where a club requests that pure bred be used. Even though the pork market may be unsettled for some time the commercial scheme is the more desirable. It is more suitable for this work than the pedigreed pig because it entails less money, less experience in feeding and selling and a quicker and safer turnover. By purchasing a pair of grade pigs in the spring the boy or girl can with careful feeding arrange to have them ready for the block early in the fall. In this way the loan and other expenditures are cleaned up each year. With the pure bred club this cannot be the case. The breeding of pedigreed swine certainly has its place but it is very doubtful if that place is with boys and girls who are operating through the assistance of a pig club.

METEOROLOGICAL RECORDS.

These records have been taken daily at the Vermilion School of Agriculture for the past five years. In this work the maximum temperatures, the minimum temperatures, precipitation and sunshine are recorded. This information is supplied monthly to the Dominion Meteorological Branch.

HONOUR ROLL, VERMILION SCHOOL OF AGRICULTURE.

Killed in Action:

- Class '16 Welfred Eyre, Vermilion, Alta.
- Class '15 William Jones, Ponoka, Alta.
- Class '15 J. D. McPherson, Red Deer, Alta.

In the Service:

- Class '15 Wm. Barr, Vermilion, Alta.
- Class '15 J. S. Arthur, Vegreville, Alta.

Class '17	L. C. Bryant, St. Albert, Alta.
Class '19	Fred E. Brown, Streamstown, Alta.
Class '17	Sydney Barnes, Blackfoot, Alta.
Class '17	J. C. Clark, Clark Manor, Alta.
Class '18	Chris Cairns, Islay, Alta.
Class '16	Harold Connelly, Vermilion, Alta.
Class '16	Lorn L. Craige, Dewberry, Alta.
Class '15	William Cunningham, Vegreville, Alta.
Class '17	Robert Elvidge, Edmonton, Alta.
Class '19	Henry Ferguson, Spirit River, Alta.
Class '16	John W. Gray, Tofield, Alta.
Class '16	Frank Gracey, Edmonton, Alta.
	E. S. Hopkins, B.S.A., M.Sc., Vermilion, Alta.
Class '17	Stanley Hall, South Edmonton, died of influenza, Jan. 5.
Class '16	Earl Henton, Paradise Valley, Alta.
Class '17	L. Hanrahan, Calgary.
Class '18	A. Hunter, Innisfree, Alta.
Class '18	Henry Hawlins, Killam, Alta.
Class '19	Geo. Hendrickson, Armenia, Alta.
Class '17	Julius Hanson, Camrose, Alta.
Class '17	Waldemar Hawkins, Stronie, Alta.
Class '15	Gordon Jones, M.M., Vermilion, Alta.
Class '17	Noble Lucas, Wetaskiwin, Alta.
Class '15	A. J. Moore, Jarrow, Alta.
Class '18	C. B. McAllister, High Prairie, Alta.
Class '19	Dick Mead, Vermilion, Alta.
Class '17	Wilson McKinley, Dewberry, Alta.
Class '16	W. Mallough, Stainsleigh, Alta.
Class '15	Chas. McLean, Vegreville, Alta.
Class '15	Alva Morrison, Mannville, Alta.
Class '16	Glen Moore, Jarrow, Alta.
Class '17	Jas. Meagher, Yonkers, Alta.
Class '17	J. S. Minns, Athabasca, Alta.
Class '17	Jas. Martin, Strathmore, Alta.
Class '16	E. C. McNish, Paradise Valley, Alta.
Class '19	A. Pinchbeck, Vermilion, Alta.
Class '18	S. Parr, Lloydminster, Alta.
Class '15	John Rowbottom, Lloydminster, Alta.
	L. G. Shanks, B.S.A., Vermilion, Alta.
Class '16	Herbert Shopland, Rochester.
Class '15	Edward Sparrow, Sedgewick, Alta.
Class '15	Alex. Sparrow, Sedgewick, Alta., D.C.M. and 1 bar.
Class '15	William Sheppard, S. Edmonton, Alta.
Class '15	Floyd Shaw, Vegreville, Alta.
Class '16	Herbert Spencer, Edgerton, Alta.
Class '19	Reg. Spencer, Islay, Alta.
Class '18	J. K. Steele, Clark Manor, Alta.
	J. G. Taggart, B.S.A., Olds, Alta.
Class '19	S. Thorne, Fort Saskatchewan, Alta.
Class '15	Roy Trimble, Vegreville, Alta.
Class '15	Philip Ure, Vermilion, Alta.
Class '18	E. C. Wallace, Coronation, Alta.
Class '16	B. J. Whitbread, Lloydminster, Alta.
Class '18	O. Younge, Chailey, Alta.
Class '16	Alfred Todd, Fort Saskatchewan, Alta.
Class '16	James Law, Cardiff, Alta.
Class '16	F. Whitstein, Westlock, Alta.

F. S. GRISDALE,

Principal.

REPORT OF THE WORK OF THE AGRICULTURAL REPRESENTATIVES.

SIR, —I beg to submit a report of the work of the Agricultural Representatives for the year 1918.

AGENTS OF GREATER PRODUCTION.

In the spring of this year a special effort was made to secure increased agricultural production and a force of sixteen men made up of members of the staff of agricultural schools and others was organized for this work.

REPORT OF THE WORK OF AGRICULTURAL REPRESENTATIVES.

The Agents were sent out early in April and worked in their allotted districts until July 31st. The main object of the work was to get more land ready for crop for 1919. The men were asked to make a special endeavor to bring the man who possessed a good breaking outfit and the man who owned unbroken land together with the view of arranging to have the land brought under cultivation. Help was to be extended to the farmers and stockmen in every way possible. Valuable assistance was rendered in many instances in securing help, seed grain, etc. Our Mechanics' Instructors were able to render valuable aid to tractor owners. Threshermen were visited early in the season and were induced to put their engines to work breaking.

When the men assembled in Edmonton to receive instructions as to their work they were addressed by Major Ashton who requested them to do what they could to secure places for returned veterans. As a consequence of this request a number of our men succeeded in compiling quite a list of names of farmers who were willing to take in one or more returned men. The work seemed to proceed very satisfactorily during the first two months, but when conscription came many of the farmers became lukewarm in the matter of endeavoring to increase their acreage for 1919. However, our men kept up an active campaign and much good was the result.

The Province was divided into sixteen districts as follows:

	AGENT	WHERE STATIONED
No. 1 comprising Claresholm	C. Tapp	Claresholm
	Macleod	
	Pincher Creek	
	Cardston	
No. 2 comprising Little Bow	A. E. Qually	Lethbridge
	Taber	
	Warner	
No. 3 comprising Medicine Hat	F. E. Robbins	Medicine Hat
	Redcliff	
No. 4 comprising Okotoks	T. L. Brown	High River
	High River	
	Nanton	
No. 5 comprising Cochrane	E. E. Brown	Calgary
	Gleichen	
	Bow Valley	
No. 6 comprising Hand Hills	R. M. Scott	Youngstown
	Acadia	

No. 7 comprising	Innisfail.....	J. G. Taggart ..	Olds
	Olds		
	Didsbury		
No. 8 comprising	Stettler.....	G. E. Holeton ...	Castor
	Coronation		
No. 9 comprising	Ponoka.....	B. J. Whitbread..	Lacombe
	Lacombe		
	Red Deer		
No. 10 comprising	Leduc.....	T. Claxton	Wetaskiwin
	Wetaskiwin		
	Camrose		
No. 11 comprising	Sedgewick.....	H. W. Scott	Sedgewick
	Wainwright		
	Ribstone		
No. 12 comprising	St. Paul.....	S. D. Snyder	Vermilion
	Vermilion		
	Alexandra		
No. 13 comprising	Vegreville.....	G. I. Brander	Vegreville
	Whitford		
	Beaver River		
No. 14 comprising	Sturgeon.....	A. W. Foley	Edmonton
	Victoria		
	South Edmonton		
No. 15 comprising	Stony Plain.....	W. G. Payne	Stony Plain
	Pembina		
	Lac Ste. Anne		
	St. Albert		
No. 16 comprising	Peace River.....	A. G. Moore	Spirit River
	Grouard		

A Ford car was purchased for each man excepting for Mr. Qually and Mr. Brander who used their own cars. An office was opened in each town where the Agents were stationed, and wherever the Provincial Government had an office of any kind in the town, desk room was secured in those offices. In several places rent had to be paid. The men did a little advertising to make their presence known and availed themselves of opportunities to address gatherings in order to get their sphere of usefulness properly understood. We found some difficulty in securing a suitable man for the north country but finally Mr. A. G. Moore was engaged and went north on May 13th. Mr. Whitbread was drafted about May 10th, and Mr. David Henderson took his place. Mr. E. E. Brown was called to the U. S. Army about June 30th. Mr. Taggart was sent from Olds to take his place, and Mr. N. S. Smith, our Agronomist at Olds, filled Mr. Taggart's place there. Mr. W. G. Payne resigned June 30th. After this date Mr. Foley looked after District No. 15 as well as his own.

FEED SHORTAGE IN THE SOUTH.

About July 1st it was realized that the feed situation in the south was serious, particularly for winter needs. Our men in the western and northern parts of the Province were given the additional duty of looking over their territory for pasture and hay areas. Many desirable tracts were found north of the C.P.R. running east from Lacombe. The most of the hay was found along the south shore of Lesser Slave Lake and along the C.N.R. line running east from Edmonton. Pasture areas were dotted all over the northern portion of the Province.

Our men in the southern and eastern portions of the Province got into contact with the stockmen and learned of their needs for the coming

winter. Practically all of our men had completed their work by July 31st. From the information sent to our office by them we were able to direct and advise intending purchasers. Mr. Moore was left in the north until August 31st, and Mr. Claxton remained at Wetaskiwin until August 15th. The people at Vegreville asked that Mr. Brander's time be extended so he remained there until September 26th.

JULY FROST.

The frost of July 23rd put a great quantity of frozen wheat upon the market, and, in a way, relieved the situation; however, the southern stockman was slow to buy it. The situation was practically this: The farmers in this end of the Province put up as much hay as possible with the idea that they would realize a good price for it, and thus make good their loss from the July frost. Many northern farmers are feeding the frozen wheat and selling the most of their hay and as a consequence the situation so far as an abundance of feed is concerned, is good. August rains in the south helped to revive the pastures very considerably and this, together with the mild winter, has relieved what, at one time, appeared to be a very serious situation.

MOVING STOCK NORTH.

During July the Dominion Government arranged with the Railway Companies to haul cattle and sheep from the south to the north and feed from the north to the south for a half rate, which the Dominion makes good to the railway companies, thus giving the farmers a free haul on stock and feed. The Province was divided by the C.P.R. line running east from Lacombe. Any point on or north of this line was said to be in the northern half of the Province. The movement of cattle and sheep and hay-making outfits northward began about the middle of July. The date up to and including which stock would be hauled free from the south to the north was November 15th, and this stock may be taken south free of freight up to October 1st, 1919. The shipment of feed south naturally began later. Many shipped their hay-making outfits north and put up their own hay; others bought in the stack or in bales. Hay or other roughage may be shipped south free of charge up to April 30th next.

The necessary application forms and certificates to secure the free haul were issued by the Department through Mr. A. W. Foley. Between the resulting correspondence and the issuing of the required papers our office work was greatly increased. All certificates have to be countersigned by our Deputy Minister and the Dominion Live Stock Representative stationed at Edmonton. Up to November 15th, 31,351 cattle, 59,405 sheep and 182 hay-making outfits had been shipped north and 86,438 tons of hay had been sent south up to December 31st.

I wish to express our appreciation of the services rendered by Mr. P. Tomkins of Grouard and Mr. Riviere, both of the Game Guardian's department.

Respectfully submitted,

A. E. MEYER,

Superintendent of Schools of Agriculture

REPORT OF THE COLLEGE OF AGRICULTURE.

SIR,—I beg leave to submit the following report of the work of the College of Agriculture for the past twelve months.

DEGREE COURSE.

During the College year of 1917-18, thirty-two students were in attendance and taking the regular work of the third, fourth and fifth years of the five-year course leading to the degree of B.S.A. They were classified as follows: Third year, 17; fourth year, 6; fifth year, 9. Of the nine in the final year seven were graduated in the spring of 1918, being the first men to receive the degree in Agriculture in Alberta; one failed and one did not take the final examination. Of the seven who were graduated two are taking post-graduate work, two have returned to their farms, two are yet in military service, and one with the Department of the Interior, Calgary. Of the others in attendance eleven enlisted at the close of the term, chiefly in the air service.

During the present College year we have twenty-four men enrolled, classified as follows: Third year, 12; fourth year, 6; fifth year, 5. Four of these are returned men. We are looking forward to the enrollment next year of several returned men who are qualified to enter our third year for the degree work. Our work this year has been somewhat crowded owing to lack of time due to the closing of the institution at the time of the epidemic.

COURSES.

The work of the College of Agriculture is comprised in three years, finished by conferring the degree of B.S.A. Students eligible to enter are graduates from the Provincial Schools of Agriculture who have been approved by the Board of Agricultural Education, and applicants bearing equivalent credits from any recognized agricultural institution. The subjects covered in the three years of the course are: Animal Husbandry, Field Husbandry, Soils, Horticulture, Veterinary Science, Chemistry, Physics, Biology, Geology, Bacteriology, English, Mathematics and Economics. So far the work in Soils has been given in the Chemistry department but for the coming year the creation of a full department of Soils has been approved, placing it on the same basis as the field crop and live stock work. The subjects of Farm Mechanics, Farm Poultry and Farm Dairying are completed at the Schools of Agriculture, but study is made of market conditions as affecting poultry and dairying in the fifth year of the course.

Details of the courses are given in the University Calendar and in a more amplified form in a College Circular.

STAFF.

E. A. Howes, B.S.A.	.....	Dean.
A. A. Dowell, B.S.A.	.....	Professor of Animal Husbandry
G. H. Cutler, B.S.A.	.....	Professor of Field Husbandry
A. L. F. Lehmann, B.S.A., Ph.D.	.....	Professor of Chemistry
P. F. Hammond, Ph.D.	.....	Professor of Physics



UNIVERSITY STRING OF BEEF AT THE EDMONTON SPRING SHOW.

F. J. Lewis, D.Sc.	Professor of Biology
E. W. Sheldon, M.A., Ph.D.	Professor of Mathematics
E. K. Broadus, M.A., Ph.D.	Professor of English
G. Harcourt, B.S.A.	Lecturer in Horticulture
P. R. Talbot, V.S., M.D.V.	Lecturer in Veterinary Science

EXPERIMENTAL WORK.

It is recognized in all progressive colleges that the instructors in Agricultural Science must be actively engaged in research work in their respective departments, in order to be in the best position to teach the work designed. Particularly is this the case with the work to be given to the students in advanced Agriculture. It is therefore the ambition of the Provincial College of Agriculture to organize Provincial Experiment Station work in keeping with the nature of the work taught, and in so doing, to render a service to the Province at large by the publication of reports from time to time upon the results of the experiments carried out. Part of this work is already under way.

Live Stock—(a) The loss to Alberta through the birth of pigs in an undeveloped condition, often hairless, has always been a large one. Last winter we set aside about fifty sows for a series of experiments looking into the several effects of housing, feeding, exercise and light conditions. The experiment is being repeated this year. Full details of the result from last winter's experiment were published in all the western agricultural publications.

(b) During the past summer experiments in the pasturing of hogs were carried on. Results in detail will be published early this spring.

(c) It is hoped to conduct experiments similar to (a) in connection with sheep next year.

Field Crop.—Experiments in connection with field crops of all kinds are now under way. These include variety tests, seed tests, plant breeding, forage crops, cultivation, etc. A visit to these plots during the summer will well repay the time spent. In this connection we might refer to the organization of experiments in co-operation with the Schools of Agriculture, by which co-operation it is hoped to achieve more comprehensive results in less time than is generally required at one central station. Publication of final results will be in bulletin form, but progress may be reported by circular from time to time.

Soils.—At present no institution in Canada maintains an independent Soils Department. It has generally been an adjunct to some other branch. Following the example of some of the best United States Universities, it has been thought well to establish a Department of Soils in our Provincial College. This was begun two years ago, but owing to war conditions it was thought best to postpone any appointment. This summer a Professor of Soils will be secured and it is hoped that this department will render a service in keeping with that of the Departments of Animal Husbandry and Field Husbandry.

Horticulture.—We know that Alberta is favorable to the production of most vegetables and small fruits but we know little about varieties, strains and cultural methods. Experiments along these lines were put under way last summer and will be continued each year. Experiments in the utilization of wild fruits have been started.

EQUIPMENT.

The College of Agriculture was started during war times and initial expense was not such as it would have been had times been normal. The Departments of Chemistry, Physics and Biology, Bacteriology and Geology, with their regular university equipment were at once available but the equipment for the more directly agricultural subjects had to be provided. During the past year we have made an advance in some departments, particularly those of Animal Husbandry and Field Husbandry. In the latter department this has taken the form of equipment, including ground, for the purpose of field experiment. To this may be added an increase in the equipment for class room and laboratory work. In the Live Stock department we have a good start in Holstein and Jersey cattle and we have now a splendid foundation herd of Scotch-bred Shorthorns. We have a small bunch of extra good steers for feeding experiment and class room work. In horses we have made a start by purchasing two good Percheron mares: one has since been champion at Calgary and Saskatoon. In sheep we have some good Hampshires and Leicesters and some fair specimens of Shropshires, Suffolks and Oxfords. In swine our stock is not yet what we would like to see, but we hope to secure improvement this year. We have representations of Berkshires, Durocs, Polands and Tamworths.

For instruction and demonstration purposes it has been found necessary at an Agricultural College to rather specialize in some one breed in each class of live stock. In addition representatives of other leading breeds should be maintained if possible.

Our steers, kept for class work and for feeding demonstration have made a favorable showing at fairs. It is hoped to go further in this line of work.

A College Farm is badly needed to meet our expanding work.

SPECIAL COURSES.

(a) *Short Course*.—In co-operation directly with the Department of Agriculture, a short course in Agriculture and Household Science is being put on during the coming week, March 3 to 8, inclusive.

(b) *Course for Returned Soldiers*.—The College of Agriculture began in October a special course of five months for returned men who were being taken care of under the Invalided Soldiers' Commission. This course is as directly practical as it is possible to make a course in Agriculture under winter limitations. It comprises work in Animal Husbandry, Field Husbandry, Horticulture and Gardening, Dairying, Poultry, Veterinary Science, Farm Machinery, Blacksmithing, Carpentry, as details may be mentioned, Shack-building, Branding, Killing and Curing of Meats, Harnessing, Driving, etc. New men are joining from month to month and so the work is divided in each subject into five units so that the men may enter without causing any duplication. In the summer the nature of the instruction will vary because much of it can be given under outdoor conditions. Unfortunately, it is necessary for many of the men to attend during the slack time only, and this condition cannot be remedied.

STAFF.

As the work for the returned men was of a necessity entirely distinct from the regular courses, we were obliged to engage several special instructors in addition to the regular staff members who were in a position to take part in this special course:

Capt. J. Lattimer, B.S.A.	Lecturer in Animal Husbandry
N. Smith, B.S.A.	Lecturer in Field Husbandry
C. E. Christensen	Instructor in Dairying
J. Shackleton	Instructor in Poultry
F. Hiron	Instructor in Carpentry
J. Cutthiel	Instructor in Blacksmithing

EQUIPMENT.

For this special course additional equipment was necessary and this has been amply provided. A large greenhouse was erected for practice work in crop, soil and garden work. The old University Machine Shop was fixed up and equipped with 16 forges, anvils and necessary tools for blacksmithing. In the Engineering Building two rooms were fitted up for Carpentry and provided with benches for 24 men at a time with a full supply of standard carpenter tools. A basement room in the Arts building was turned into a Dairy School capable of handling 25 men at a time. Instruction in poultry is given at the Provincial Poultry plant. Our regular equipment in the other departments has been available when needed.

PROGRESS.

We have now 77 men registered for this course. Owing to delay on account of the epidemic, the first comers will not finish their course until the middle of April. Any who wish to leave in the spring with their course unfinished may re-enter in the fall.

COMMENT.

The course has been very satisfactory from every standpoint. The progress of the men has been marked. The attendance, punctuality and interest have been of the highest order. Many kind things have been said about this course by inspectors and other visitors. It is only fair to say that the success is due first to the type of men who have entered for this course, and second, to the earnestness and adaptability of the instructors engaged in the work and third, to the provision made, on short notice, to secure additional staff and full equipment.

It may not be out of place to emphasize the fact that the entire work of the course has been aimed to meet the needs of the man starting to build a home, or in other words, all instruction not immediately essential to this end has been eliminated. The need for this course should disappear in two years at most.

In conclusion it may be pointed out that with the Schools of Agriculture annually furnishing an increasing supply of ambitious boys, the work of the Provincial College of Agriculture should show marked pro-

gress. We are not intent upon graduating teachers and officials in Agricultural work alone, although our Canadian supply is not nearly adequate to the demand. We are anxious to see our graduates returning to the land to raise better crops and better stock, to develop better homes, and to assume their places as leaders in a manner parallel to that of the educated men in other professions. At best we can only start them out with foundational knowledge of Agriculture and a consciousness that their education is never finished. These should make good citizens.

Respectfully submitted,

E. A. HOWES,

Dean.

REPORT OF THE PROVINCIAL VETERINARIAN

SIR,—I have the honour to submit herewith the annual report of the Provincial Veterinarian's Branch of the Department of Agriculture for the year 1918.

The work of this branch consists of the giving of lectures on Veterinary Science to students in the various institutions teaching agriculture throughout the Province of Alberta. We also have the supervision of the health and care of the live stock kept on the seven Demonstration Farms in the Province. The work of this branch has also been considerably increased this year due to the fact that losses from weed poisoning and blackleg were continually being reported. In addition to this an epidemic of eye trouble occurred among cattle in the northern part of Alberta which was difficult to stamp out until the people became aware of its seriousness.

INSTRUCTION IN VETERINARY SCIENCE.

Schools of Agriculture.—During the time the agricultural schools are in operation, lectures are given to the students on the common diseases affecting farm animals in Alberta. Students are also given general instruction in the care of the different kinds of livestock.

University of Alberta.—Lectures on Veterinary Science are given at this institution. The studies taken up are more advanced than those covered at the Agricultural Schools and are intended to direct the graduates in the work of prevention and eradication of diseases affecting the live stock in Alberta. Instruction is also given to the soldiers taking the agricultural course at the University. The lectures given to them concern the common ailments of farm animals with their prevention and treatment.

Demonstration Farms.—This branch has the supervision of the health and care of the live stock on these farms. The farms are visited frequently in order to prevent endemic diseases from occurring. Systematic testing for tuberculosis has been done on the farms with very satisfactory results.

Miscellaneous.—In the outlying districts where the services of a veterinary surgeon are unobtainable, outbreaks of disease occur from time to time which require prompt attention. This branch endeavored to assist the people in these localities by instructing them as to the best means of combatting the various diseases that occur. Meetings have been held throughout the Province in order to inform our stockmen as to the danger of these epidemics.

LIVE STOCK DISEASES IN THE PROVINCE.

Stockmen in Alberta should take special notice of certain diseases. The Department is trying to help those who are in outlying districts and who request information regarding diseases among the live stock. All possible help is given to farmers who are not able to obtain the services of qualified veterinary surgeons and who are likely to suffer losses.

Blackleg.—This disease has been very prevalent in the past year and this Department has put forth an energetic campaign to try and combat it effectively. At the agricultural schools the students are taught the dangers of Blackleg and how it can be systematically controlled. The returned veterans taking the agricultural course at the University have also been given full instructions regarding it. We have also had put up in every post office in the Province a notice setting out the symptoms and prevention of Blackleg, and we have every reason to believe that great benefits will be derived from these efforts. Blackleg is known throughout the Province by a great variety of names: Black Quarter, Symptomatic Anthrax, Black Quarter Ill, Quarter Evil and Charbon.

Characterization.—It is an acute infectious disease of cattle characterized by the development of a puffy swelling usually in the region of the hind quarter or the shoulder. It may affect cattle, sheep and goats, although the latter two kinds of cattle are rarely attacked. In cattle it rarely occurs in those under six months, and in adults after the fourth year. Infection takes place through wounds in the skin and frequently through the digestive tract. Although reported to be seen only during the summer months we have almost as many outbreaks in the Province of Alberta during the winter as at any other time. It is said also to occur more frequently in low lying land, but in Alberta we have as many outbreaks on high dry land as any place else.

Etiology.—Blackleg is caused by *Bacillus Chauvæi*. This organism varies from 3 to 6 microns in length. It is rounded at the ends and produces spores. It is anaerobic and multiplies rapidly with the evolution



VACCINATION AGAINST BLACKLEG.

gas. The presence of spores renders it very resistant to all the common disinfectants.

Symptoms.—There is a very rapid elevation of temperature often reaching as high as 107°F. It usually falls to normal or sub-normal before death, when there is pronounced depression, loss of rumination and appetite. In the early stages there is great congestion of the mucous membranes but this is followed in a few hours by their taking on a dirty lead or purplish color, the animal moves with difficulty and lies down frequently; swellings may appear on different parts of the body but are most commonly met with on the thighs, neck, shoulders and lower region of the chest. The swelling spreads rapidly and may in a very short time attain large size, when it emits a crackling and a gurgling sound when the hand is passed over it. At the centre of the large swellings the skin becomes dry, cool to the touch and painless upon pressure. If opened with a knife it emits a dark reddish frothy fluid with a sweetish disagreeable odor. There is usually well marked bloating and also trembling of the muscles which as death approaches may develop into convulsions.

Prevention.—If at all possible it is advisable to remove the well animals from the infected pasture. The dead animals should be burned or in case this is impossible, be buried deeply and covered with quicklime. Dogs and birds should never be allowed access to the carcasses, and the skin should never be removed. It is also desirable to thoroughly disinfect the ground where the animal was lying at the time of death.

Vaccination.—The most common method of vaccination against Blackleg which is being employed consists of the injection under the skin of attenuated virus prepared in either pellet or powdered form. There were several shortcomings of this particular form of vaccination, and recently there has been put upon the market a new preparation, Blackleg Filtrate Aggressin, which has gained considerable popularity. A brief summary of its advantages are: (1) It is a very effective immunizing agent; (2) it confers an active immunity which protects cattle against the disease for life; (3) as it is germ proof it does not contain the Blackleg germ in any form, therefore it cannot produce the disease, and losses incidental to vaccination with the pellet or powder form are entirely avoided; (4) it is prepared in concentrated form and when suitably prepared will retain its potency for an almost indefinite period.

For the convenience of the farmers and stockmen throughout the Province, the Schools of Agriculture at Claresholm, Olds and Vermilion have for distribution a supply of this vaccine which is sold at cost price.

HORSES.

Typhoid Influenza.—Owing to the large number of cases of Typhoid Influenza reported in the outlying districts and the mistaken idea that it is related to and analogous to the human influenza which is prevalent in some parts of the Province, the following information regarding this disease may be beneficial:

Occurrence.—It usually appears in marshy districts with bad drainage. It is also most common during hot weather and it shows a predilection for rich damp soils. We also find it more common during wet

seasons. Sporadic cases of the disease are reported from time to time, but as a rule it appears in more or less circumscribed localities.

Etiology.—From observations made we know that apparently recovered horses may harbor the infection for a long time and still be capable of transmitting the disease. Such animals are no doubt responsible for many outbreaks and account for the occurrence in a locality which has been free from the disease until the introduction of new and apparently healthy animals. One attack is usually self-protective and we frequently find old horses incapable of contracting it again. On the other hand young horses four or five years old seem predisposed to it. Horses kept in damp, dirty, infected stables, or overfed fat young horses seem to be susceptible. Contagion will remain in straw bedding and in the feed in an infected stable for a considerable time, and if they are removed to other localities may be carried with it. It may also be carried with clothing of those who have been in attendance on horses suffering from the disease. Infection usually takes place from horse to horse through secretions and excretions which are especially infectious during the development and at the height of the disease. The general belief is that horses become infected through the digestive tract, although it is believed by many that infection occurs through the respiratory organs as well. In many cases one attack seems to confer immunity, but a second infection or a relapse often occurs. These secondary relapses as a rule prove fatal. The longer the epizootic lasts the milder the disease seems to be. This may be due to a gradual attenuation of the virus. We believe the period of incubation to be about two to seven days, but occasionally the symptoms have not appeared until from two to four weeks after the latest known exposure.

Symptoms.—Symptoms vary with the severity of the attack, and with the animal affected. The disease appears suddenly and may attain its greatest point of intensity within twenty-four hours. Any or all of the following organs may be affected: Circulatory, digestive, respiratory, muscular membranes, conjunctiva and nervous centres. An elevation of temperature of from one to seven degrees appears suddenly, there is partial or entire loss of appetite and considerable depression, the pulse is rapid, often being as fast as 60 to 70 beats per minute. There is a characteristic unevenness in distribution of the external temperature of the body, there is frequently a muscular debility which gives the animal a queer waddling gait. There is often a conjunctivitis with considerable swelling of the eyelids, probably the first indication of this would be the presence of tears, intolerance of light, and contraction of the pupil, and the congestion of the mucous membrane in the nostril. First there is serious and later a muco-purulent discharge from the nose, slight swelling of the submaxillary glands, increased respiration and a cough. The disease usually lasts from 6 to 10 days, although severe cases may run for two to three weeks, and very mild ones may recover in from three to six days.

Prevention. The removal of uninfected horses from infected stables is very important. Newly purchased horses should be kept separate from others until the owner is satisfied that the animal is not affected. There are various vaccines on the market which immunize horses against this disease and which are giving satisfaction. Persons purchasing valuable horses would do well to have them vaccinated against influenza by a

competent veterinary surgeon. The treatment for animals suffering from this trouble should be in the hands of a competent veterinary surgeon if possible. So many complications arise that every case requires its own treatment and there is no recognized treatment for them all.

Infectious Keratitis.—A large number of cases of this disease were reported to this office during the summer, principally along the C.N.R. between Edmonton and Lloydminster. It usually appeared in an enzootic or epizootic form, and affected a considerable number in the herd. It is distinctly contagious and may be brought into a healthy herd by one infected animal. It may continue in a herd throughout the summer and fall affecting all newly purchased animals. During the fall and winter it apparently dies out. It affects old and young cattle alike. The symptoms are first shown by an exudation into and a white film (opacity) of the cornea of the eye. On the anterior part of the eye-ball an irregular bladder-like swelling may form. If the whole cornea is affected it takes on a grey or greyish white appearance. The flow of tears is not particularly well marked, nor does the animal appear to suffer to any very great extent. In favorable cases the exudate within the cornea begins to disappear within a week or ten days, the eye becomes clearer and regains its transparency until it eventually is fully restored. In unfavorable cases blood vessels form over the cornea, vision becomes entirely lost and permanent blindness takes place. In some cases a suppurative inflammation takes place, manifested by a raised swelling on or near the center of the cornea that shortly takes on a yellowish color. It not infrequently happens that the pus cavity may extend into the anterior chamber of the eye, which on being ruptured may evacuate not only the pus but the contents of the eye as well and the sight may be permanently lost.

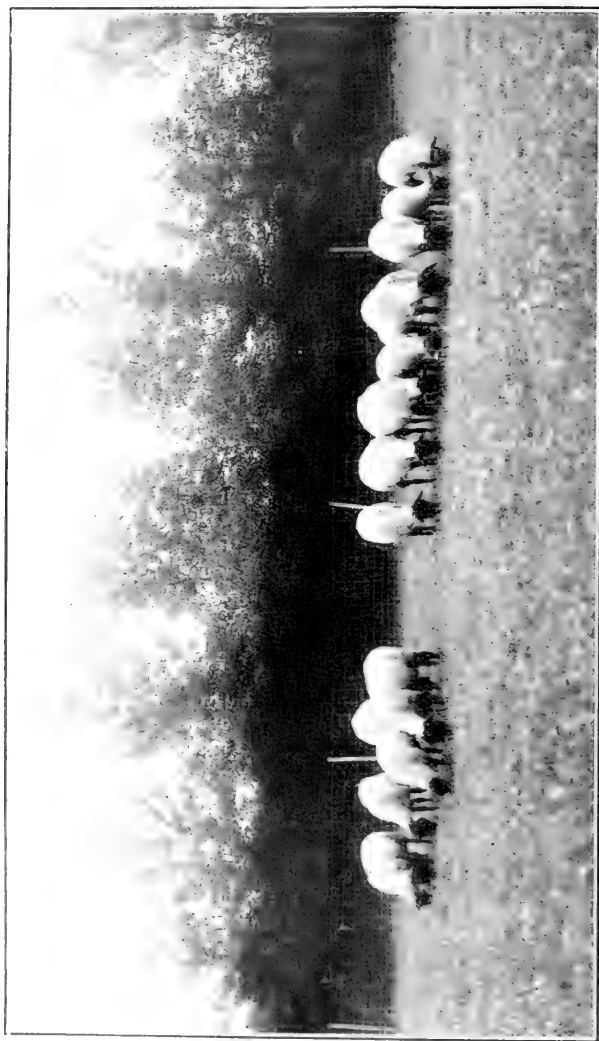
Many treatments have been tried with varying success, but if the services of a qualified veterinary surgeon are obtainable, they should be procured at once. We have found the application of calomel especially useful in certain stages of the disease, but it should be used with caution.

Sheep and Swine.—Sheep and swine have been practically free from disease this year. As all contagious diseases are handled entirely by the Dominion Government at Ottawa, only minor ailments such as result from poor feeding and from poisoning by weeds have been reported to this office. The rapid progress and increasing profits which sheep-raising and swine-producing show, tend to make it a carefully studied business, and few calls or requests for assistance are received.

WEED POISONING.

The subject of poisonous plants is becoming a very live issue among the stockmen of this Province. Numerous requests were received by telegram and letter to examine cases of weed poisoning and an effort has been made to see as many cases as possible and thus be able to note the symptoms of poisoning and the special circumstances of each case. In some cases it was impossible to reach the locality in time to observe the early symptoms, but in the majority of cases the conditions of the poisoning were studied in the field at first hand.

It is estimated that there is more loss in live stock from weed poisoning than possibly from any other cause. Could the stockmen become



REGISTERED SUFFOLKS AT THE STRATHMORE SUPPLY FARM.

acquainted with the different poisonous plants growing in their districts, it would assist in reducing the loss to a very considerable extent. Up to the present time it has been extremely difficult for those interested in the cattle, sheep and horse industries to secure literature dealing with this subject. This can be attributed to the fact that the study of plant poisoning is only in its experimental stage and up to the present little or nothing has been known about it.

The different symptoms produced by different toxins are confusing and it is hard to come to a conclusive diagnosis. If it were possible to try out the feeding of stated quantities of the various poisonous plants at different stages of their development, carefully noting the symptoms resulting from this feeding, considerably more might be done. It is found, however, in the experiments already made that like chemical poisons, each poisonous plant has its own peculiar action. Some affect the nervous system, others the voluntary muscles, some the brain, while perhaps the digestive apparatus is the only organ involved. One should also bear in mind in the study of plant poisoning that the months of April, May and June are really the dangerous periods, and stock often seeking shelter from late snows, or long continuous rains, are apt at the cessation of these to be hungry and less particular as to the kind of forage eaten. The first green shoots of the Water Hemlock, Larkspur and Death Camas appearing in the early spring, are believed to be much more poisonous than when matured and flowering. Certainly they are much more tempting and palatable while young, which no doubt accounts for the many deaths occurring during this period.

WHERE PLANTS ARE FOUND.

It seems to be the case that in Alberta there are a considerable number of plants with which people are unfamiliar, which at certain periods of their growth produce poisonous effects on live stock, but the ones most commonly met with and producing greater loss than any others are the Water Hemlock, Larkspur and Death Camas. These plants are found frequently in certain seasons of the year and there is no doubt that they produce greater loss in some years than in others. It would be impossible to name each individual district affected with these poisonous plants, but it is found that the Water Hemlock and the Larkspur are generally distributed throughout the northern part of the Province and the foot hills of the Rocky Mountains. The Death Camas is confined almost strictly to certain localities in the south towards the Montana boundary. Isolated cases may be found in other sections of the country farther north, but up to the present time no complaints of poisoning by this plant have been reported in Northern Alberta. In bringing out this report, the object is to present to those interested in the preservation of our live stock as much data as possible relating to this work, in the hope that by becoming proficient in recognizing the various poisonous plants, some assistance can be given in the extermination of them.

The treatment or antidotes in plant poisoning will be in many cases disappointing until such time as a more definite knowledge of the toxin of these plants is known. Then only can one expect to find something to counteract the toxemia produced by these poisons.

Influence of Heavy Rainstorms.—It has been observed that during the spring months, poisoning is apt to occur after heavy rains. The explanation offered for this fact is that certain plants may be more poisonous when wet with rain or dew than under other conditions. Also it is suggested that stock when feeding immediately after heavy rainstorms are more apt to pull up the roots of the plants than when the range is dry. It is well known that in the case of many poisonous plants the active principle is located in the roots and that large quantities of the leaves and stems would have to be eaten in order to cause serious poisoning. It is also possible that storms accompanied by winds may beat down the weeds and grass together so that stock will not distinguish them so readily as under dry conditions. Cattle and horses often suffer from poisons after late snowstorms, and especially from the Larkspur (*Delphinium glaucum*). This plant is greedily eaten by cattle, largely perhaps for the reason that nothing else is to be obtained without digging under the snow. Continuous rains or snowstorms also cause stock to seek shelter from which they come forth hungry and exercise little discrimination in their choice of forage and in consequence suffer from poison. Serious cases of poisoning among sheep have occurred while the bands were being driven from one locality to another. This may be attributed to the fact that sheep cannot make the same choice of forage while being hurried over the range as they can under conditions of rest. The condition of the stomach, whether full or empty, no doubt plays an important part in the poisoning of sheep and cattle. Eating whatever is in sight as rapidly as possible, they are liable to consume large quantities of plants of kinds which when taken in small quantities are not harmful, but which in large amounts produce serious disturbances.

Following is a list of poisonous plants which are found to be most dangerous in the Province, together with a few notes in each case:

Water Hemlock. This plant is widely distributed throughout Alberta. It is allied to the cultivated parsnip and resembles it to some extent. Its ordinary habitat is along the banks of streams and irrigation ditches, on wet railroad embankments and in swamps and meadows. The number of cattle poisoned by Water Hemlock is very considerable. It is to be feared mostly between the time it starts to sprout in the early spring up until the time it starts flowering, which is usually about the end of June. During that time it offers an abundance of tempting fodder to live stock and is especially dangerous in a season in which the grass is backward.

This plant as already stated, grows in wet places and except where the grass has formed a tough sod its roots may be easily pulled up with the foot. From data gathered it would seem that the leaves and stems, including the basal portion, at least in the early stages of growth, contain sufficient poison to produce death. The roots contain a virulent poison and several cases have been reported of horses becoming poisoned from eating hay cut in meadows containing the root of the Water Hemlock.

The symptoms of this plant poisoning depend a great deal upon the quantity eaten. There is usually profuse salivation, frothing at the nose and no doubt excessive urination. There are well marked convulsions and tremors and twitching of the muscles. This is usually followed by coma in which death takes place.

Up to the present time the treatment has not been satisfactory. In some cases beneficial results have been obtained from large doses of raw linseed oil, melted lard and milk.

Loco Weed.—For a considerable number of years a disease called "Loco" affecting cattle, horses, and sheep has been widely known to the stockmen of Southern Alberta. The disease has most commonly been attributed to the action of certain plants, several species of which have been suspected of producing the "Loco" condition in animals and have been called Loco Plants or Loco Weeds, and also Crazy Weeds from the nature of the symptoms produced. Fortunately nearly all the species of plants are restricted to the foot hills of the Rocky Mountains, and especially to that locality known as the Porcupine Hills. From reliable observations on the subject of Loco disease, it would seem that it is the result of eating undue quantities of certain weeds of which a number are known. The disease may assume either an active or chronic form. In the active form, the animal lives but a few days, while in the chronic form, which is the one mostly met with, it may live for two or more years and manifest the same symptoms in the milder degree.

Horses and sheep are the animals most frequently affected. Cattle occasionally acquire the "Loco habit" but the cases are exceptional. From a careful study of the Loco weed we find that horses, cattle and sheep eat this plant with great readiness, particularly if they come across it at a time when grass is somewhat scarce. Several of the different species of the plant are green during the winter when all grass on the hills is dry and brown. These plants being quite prominent, induce an animal to try them, and because of their succulent character and agreeable taste, it may continue to eat them. During the spring months before the grass starts, where the Loco is abundant, practically all animals eat more or less of it. As the grass comes on, many leave the Loco plants and devote themselves entirely to grass, while others acquire a taste for the plant and an appetite which is not easily overcome, and they will continue to eat the Loco Weed even where there is abundance of other feed.

Some cases are noticed where both horses and cattle will eat Loco Weed for a considerable length of time and suffer no harm, while others which acquire the habit of eating the plant almost exclusively, may linger along for several months but more frequently die within a few weeks. Sheep also are poisoned in much the same way. The effect of the poisoning seems to be especially noticeable in lambs.

It is also noticed that there is considerable difference in the readiness with which various breeds of animals will eat Loco Weed. Native bred horses are very much less likely to be locoed than imported animals. Finer breeds of animals are more likely to become locoed than poorer breeds.

There has not been much opportunity of carrying out very much experimental work relating to this plant, but the results obtained from the present investigations have proved very contradictory.

Larkspur.—This poisonous plant has rather wide distribution in the Province. Its habitat seems to be rich and moderately moist, half shaded localities, especially among underbrush and along streams. There is some difference in the appearance of the plant, depending on the altitude in which it is found. That found in the foothills is much smaller and the flowers a much deeper blue, than those in the lower plains.

All, or nearly all, cases of poisoning from this plant in Alberta have been among cattle. In this Province the leaves of the plant become conspicuous about the last of April and the flower begins to open about the middle of June. Often late snows occur and when there is no verdure in sight the uncovered portion of the Larkspur is in a high degree tempting to stock, all the more because it is succulent. The danger of this plant is increased by the fact that at the time of snow falls cattle seek shelter where the Larkspur is more abundant and more advanced in growth. From our experience we find it should be regarded as dangerous from May until the middle of June, and it is strongly suggested that during this period cattle be kept away from the regions where the plant abounds.

Although many cattle are undoubtedly killed by eating this species of Larkspur, there are few cases reported of such poisoning. The reason of this no doubt lies in the fact that cattle, unlike sheep, being left to the care of themselves, are more frequently found dead than alive and hence we are unable to collect the symptoms with which cattle are mainly affected. Sheep are rarely affected with Larkspur poisoning. Frequently bloating is the only indication of the trouble, and the animal may or may not exhibit any other symptoms of the poison. When considerable quantities of the plant are eaten the animal shows stiffness in the legs and has difficulty in walking. There is spasmodic twitching of the muscles and convulsions in the final stages. As in the case of the Death Camas, referred to later, there is reduced pulse and breathing ending in convulsions and death.

The popular treatment is bleeding at the extremities and the administration of melted lard, bacon grease or oil. In cases where bloating is the only symptom the animal should be punctured with a trocar and cannula to allow the accumulation of gas a chance to escape.

Death Camas.—Of all the plants which are known to poison stock, the Death Camas is probably the worst. This plant is found mostly in the southern part of the Province and where found usually grows in great abundance. Its habitat is as a rule in moderately moist places, and it generally springs up earlier than the native grasses. It resembles grass leaves closely though slightly thicker and more succulent. It is generally found in coulees, on the sides of the foothills and frequently on high bench lands. As stated, it grows in abundance in certain localities and it is therefore an easy matter for a large number of sheep to become poisoned in a short time. Why sheep are the only animals to be affected by this plant, I am unable to say, but cattle and horses seem to be immune from its effects.

The symptoms are remarkably uniform and any sheep-raiser noting the following symptoms should not fail to recognize the case of poisoning by Death Camas. The first thing noticed will probably be uneasiness and irregularity in the movements of the sheep, these indications rapidly increasing accompanied by spasms and rapid breathing until the animal passes into a state of motor paralysis with a frequent weak pulse. The duration of these stages of poisoning depends entirely upon the amount of Death Camas eaten.

When large quantities have been consumed, the symptoms follow in quick succession and death results in from one to three hours. The

popular remedy for poisoning by Death Camas is bleeding in the extremities, usually at the mouth or tail, and it has been found effective in the early stages of the poison. A remedy that has come into considerable repute of recent years is the administration of equal parts of potassium and aluminum sulphate. A teaspoonful of the mixture dissolved in water is enough for about twelve sheep.

THE STALLION ENROLMENT ACT.

The Stallion Enrolment Act came into effect on January 1st, 1918, when inspectors appointed in accordance with the terms of the Act, commenced making their tours of inspection which covered the entire Province according to dates and places advertised. Owing to the unfavorable weather and bad roads many owners were unable to bring their horses out for inspection on the dates advertised, and a great deal of ground was covered by the inspectors a second time in order to give owners the benefit and protection of the Act. It was found that a great many pedigrees had not been recorded at Ottawa in the names of owners as required by the Act, making it impossible to issue certificates of Enrolment in such cases, but Interim Certificates were given in many cases for the assistance of owners.

The following list gives the number of enrolments issued during the year:

		PURE BRED.			
		PERCHERON.		THOROUGHBRED.	
Class	Number	Class	Number	Class	Number
1	425	1	15	1	15
2	436	2	6	2	6
3	46— 907	3	0— 21	3	0— 21
		CLYDESDALE.		HACKNEY.	
1	397	1	9	1	9
2	579	2	4	2	4
3	30—1006	3	1 - 14	3	1 - 14
		BELGIAN.		STANDARD BRED.	
1	71	1	43	1	43
2	50	2	31	2	31
3	3— 124	3	4 - 78	3	4 - 78
		SHIRE.		FRENCH CANADIAN.	
1	30	1	0	1	0
2	42	2	1	2	1
3	6— 78	3	0 - 1	3	0 - 1
		SUFFOLK.		FRENCH COACH.	
1	22	1	2	1	2
2	17	2	1	2	1
3	1 - 49	3	0— 3	3	0— 3
		Total		Total	
		1109		2272	
		GRADES.			
		1109		1109	

Total inspected 3372

Respectfully submitted,

P. R. TALBOT.

Provincial Veterinarian.

LIVE STOCK COMMISSIONER'S REPORT

SIR.—I beg to make the following report for the year 1918:

The Acts and Ordinances relating to the following matters are administered by the Live Stock Branch: Fences; Strays; Impounded, Dangerous and Mischievous, and Entire Animals; Brand Inspection; and the Live Stock Encouragement (The Cow Bill).

In addition to the foregoing, work was carried on during the first half of 1918 by the Live Stock Branch, having for its object the increased production of bacon in Alberta. This work was begun in November, 1917, and consisted largely of addresses to farmers on the urgent need of meat, particularly bacon, by the allied armies. In December it was decided to purchase and breed six hundred sows, and sell them to farmers at cost. At the close of 1917, owing to unsteady market conditions, it was decided to suspend buying until the market became steadier, and the attitude of the farmer became clearer. The operations of December, 1917, were as follows:

Number of sows bought	178	
Number of boars bought	8	
Number of sows sold to plants, unsuitable	2	
Number of sows sold to farmers	10	
Number of sows that died	1	
Number of sows on hand	165	
Number of boars on hand	8	
		186 186

Later a keen interest in the matter of bacon production from a patriotic motive was manifested by a large number of farmers and it was decided to resume buying and bring the number of sows to be distributed to as near the original standard as possible.

The total operations were as follows:

Number of sows bought	391	
Number of boars bought	17	
Number of sows sold to plants	92	
Number of sows that died	4	
Number of sows sold to farmers	295	
Number of boars sold to farmers	16	
Number of boars fattened and sold to plants	1	
		408 408

PURCHASE ACCOUNT.

408	Hogs purchased for	\$12,618.83	
75	Increase		
92	Sold to plants	\$ 3,366.61	
67	Sold to farmers	12,208.67	
4	Died, sold for	5.00	
	Gross profits	2,961.45	
163	163	\$15,580.28	\$15,580.28

DISTRIBUTION.

Net cash returns from sale of hogs		\$2,961.45
Feed	82,749.59	
Labor	1,359.36	
General Expenses	614.52	
Repairs, upkeep and loss on equipment	450.29	
Net loss		2,212.31
	85,173.76	85,173.76
Average sum paid per hog		\$30.92
Average sum realized per hog		\$33.80

Owing to the extremely dry weather that prevailed during the summer of 1918 throughout the eastern and southern parts of the Province and the severe frost that visited the northern and western sections on July 23rd and 24th, feed grain became very scarce and the final results of the efforts of this branch to secure an increased production of bacon were disappointing. A large percentage of the pigs had to be marketed underweight and sold at a dockage of approximately five cents per pound. Although there was an increase in the number of hogs marketed in the Province during 1918 as compared with the number in 1917 of about 25%, it is doubtful if the actual number of pounds of pork was any greater. The range of prices being higher, however, the returns to the farmer were greater, but as the cost of producing or buying the grain was materially greater, many farmers lost money on the season's operations.

There was at the close of the year a decided tendency on the part of the farmers to reduce their stock of brood sows.

Hog prices throughout the year averaged as follows:

TOP PRICES FOR HOGS, CALGARY, 1918.

	<i>Highest.</i>	<i>Lowest.</i>	<i>Average.</i>
January	19.20	17.65	18.32 ¹ / ₂
February	19.75	18.50	19.16 ¹ / ₂
March	20.50	19.00	19.77
April	21.25	19.75	20.62 ¹ / ₂
May	20.35	19.25	19.75
June	18.25	17.85	18.07 ¹ / ₂
July	19.25	18.15	18.60
August	20.25	19.75	19.68 ³ / ₄
September	20.25	19.75	19.93 ³ / ₄
October	19.50	17.75	18.37 ¹ / ₂
November	17.25	16.75	16.95
December	17.35	17.25	17.32 ¹ / ₂

SHEEP.

The number of sheep in the Province has been officially estimated at 322,179 head. Recent increases would probably raise this to at least 400,000. The industry had been on the increase for at least a decade both as a ranching and as a farm enterprise, and at the beginning of the year the price of good grade breeding ewes had attained the sum of \$25.00 per head. The drought that visited Southern Alberta, however, imposed numerous hardships upon the wool growers, with the result that many shipped their bands to Central Alberta; others reduced them to the number

they were able to maintain at home and still others sold out entirely. The number shipped north aggregated 59,405 head. Of these, 15,000 head were returned to the south before the close of the year. There is reason to believe that the greater portion of those still in the north and central part of the Province will remain there permanently. Some of the flock masters have acquired permanent ranching sites there; others have sold out their bands in small lots suitable for farm flocks and still others have put theirs out on shares.

TOP PRICES FOR FAT WETHERS, CALGARY MARKET, 1918.

	<i>Highest.</i>	<i>Lowest.</i>	<i>Average.</i>
January	14.00	14.00	14.00
February	15.00	15.00	15.00
March	16.00	15.00	15.75
April	15.50	15.00	15.37½
May	16.50	15.50	15.75
June	16.50	15.50	16.25
July	14.00	13.00	13.75
August	13.00	11.00	11.87
September	13.00	12.50	12.71
October	12.50	12.00	12.25
November	11.00	11.00	11.00
December	12.00	10.50	11.33⅓

CATTLE.

Despite the reverse which the growers of beef cattle experienced because of the drought in the southern part of the Province, and despite the cessation of hostilities in Europe and the prospect of reduced prices interest in beef cattle continues unabated. With the exception of a slight



GOOD TYPE AND GOOD CONDITION ILLUSTRATED IN THE HAMPSHIRE.

decline in prices during the month of November because of the epidemic of Spanish Influenza, the price of stocker cattle was well maintained until the close of the year. The unabated interest in pure-bred cattle gives promise of general improvement in the quality of cattle stock.

A movement of cattle northward took place as a result of the drought, one herd numbering 300 head being shipped from Medicine Hat to Spirit River and trailed from there to Fort St. John in the Peace River Block of British Columbia. The total number moved was 31,351. This movement of cattle is being followed with a keen interest by Southern Alberta stockmen with a view to ascertaining the possibilities of the Peace River district as a cattle growing country. The writer is in daily receipt of letters of inquiry regarding the securing of sites for stock growing, the quality of the grasses and climatic conditions.

BULL SALES.

The result of the bull sales conducted by the breed associations was as follows:

SALE AT EDMONTON, APRIL 4TH, 1918.

<i>Breed.</i>	<i>No.</i>	<i>Value.</i>	<i>Average.</i>
Saorthorns	115	\$26,940	\$234.26
Herefords	17	3,700	217.65
Aberdeen-Angus	8	1,805	225.63
Holstein	1	—	135.00
Total	141	\$32,580	\$231.06

SALE AT CALGARY, APRIL 4TH, 1918.

<i>Breed.</i>	<i>No.</i>	<i>Value.</i>	<i>Average.</i>
Aberdeen-Angus	77	\$22,255	\$289.03
Galloways	3	525	175.00
Herefords	254	86,545	340.73
Red Polled	2	485	212.50
Shorthorns	448	101,250	226.00
Total	784	\$211,000	\$269.13

SALE AT LACOMBE, MAY 29TH, 1918.

<i>Breed.</i>	<i>No.</i>	<i>Value.</i>	<i>Average.</i>
Aberdeen-Angus	20	\$ 3,355	\$167.75
Herefords	54	12,530	232.03
Shorthorns	103	18,085	175.58
Red Polled	2	280	140.00
Total	179	\$34,250	\$191.34

CATTLE PRICES.

The following is a record of the prices realized for prime steers on the Calgary market during the year 1918:

TOP PRICES FAT CATTLE, CALGARY MARKET, 1918.

<i>Month.</i>	<i>Highest Price.</i>	<i>Lowest Price.</i>	<i>Average Price.</i>
January	11.50	10.20	10.88 $\frac{3}{4}$
February	12.00	11.00	11.25
March	12.25	11.80	12.03 $\frac{1}{4}$
April	13.35	12.50	12.75
May	16.80	14.50	15.49
June	14.00	12.25	13.31 $\frac{1}{4}$
July	13.60	12.50	13.08 $\frac{3}{4}$
August	14.80	13.00	14.01 $\frac{1}{4}$
September	13.50	13.25	13.43 $\frac{3}{4}$
October	13.00	11.50	12.20
November	12.50	12.25	12.37 $\frac{1}{4}$
December	14.00	13.00	13.66 $\frac{2}{3}$

HORSES.

Conditions prevailing in the horse raising industry during 1918 have not been such as to cause farmers and ranchers to increase their stock of brood mares. There were no purchasing campaigns for war purposes during the year, consequently the demand was almost entirely local. Immigration was limited and the demand for horses for agricultural development purposes was correspondingly limited. Some demand was created for general purpose and light agricultural horses as a result of advances made to returned soldiers in order to enable them to establish themselves on the land.

For agricultural and draught horses of good type and quality there is still a fair demand and they are still bringing remunerative prices. It is probably the case that the introduction of tractors in the grain growing areas may have slightly affected the price of heavy stock. The motor car has seriously curtailed the demand for the lighter breeds. This fact was made conspicuous by the feed shortage on the range, where the light horse was frequently referred to as belonging to the "gopher" class.

An agitation was started on this account with a view to devising some means of ridding the province of its surplus of inferior horses. This agitation received the support of the Alberta Horse Breeders' Association and was brought to the attention of the Food Control Board and the Board was asked to make such arrangements as might be necessary to have these animals slaughtered and exported to those countries in which horse flesh is used as human food. The matter was under advisement by the Board but no announcement had been made at the close of the year of the action that would be taken.

What should be a milestone in the history of horse raising in Alberta is the sale by Mr. George Lane, of Calgary, of 22 head of pure-bred Percheron mares and one stallion which are to be used in the establishing of a Percheron stud in Great Britain.

LIVE STOCK ENCOURAGEMENT ACT.

Several things transpired to curtail the operations of the above Act during 1918. In May borrowers began to send in word that they had been notified to report for military duty and that they were compelled, in some cases, to sell and in others to transfer their cattle to some other

person. As these borrowers were widely scattered, and as the time allowed them was usually short, prompt action was necessary: a great deal of time was consumed and expense incurred in making these sales and transfers. Owing to the urgency of most of these cases and to the policy adopted by this branch to give precedence to all calls of this nature, it was sometimes found necessary to send an inspector into a district that had been covered but ten days or two weeks previously, thus consuming more time and incurring more expense.

In August reports began to come in from borrowers in the south stating that owing to the drought and consequent scarcity of feed, or their inability to remain on their farms, they were obliged to transfer or sell the cattle they had purchased the year previous. During the month of November all outside work was suspended on account of the epidemic of influenza, and since then much time has been consumed arranging for the sale or transfer of the cattle of borrowers who had died.

The operations to date show the following results:

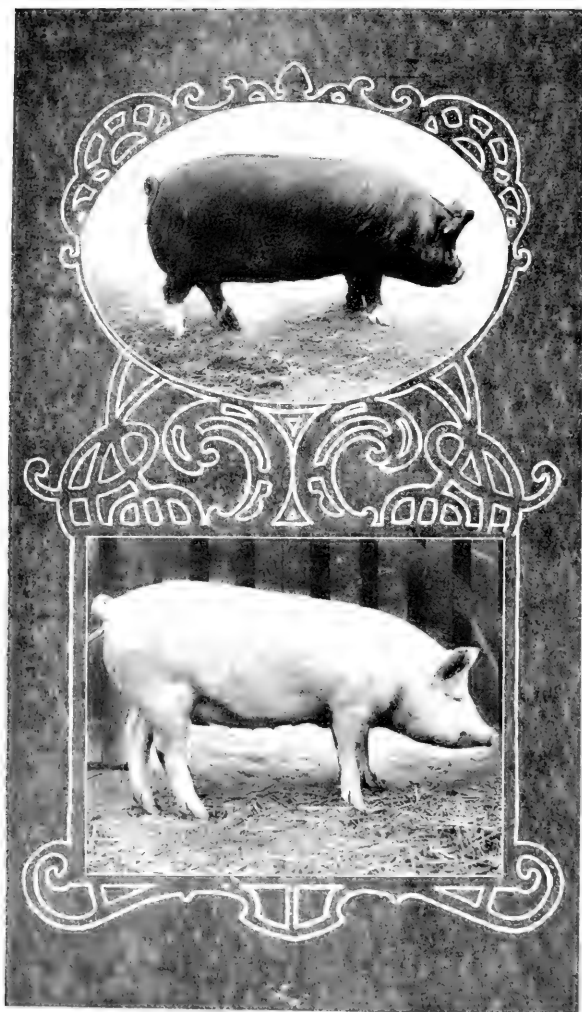
Number of applications received	929
Number of applications being dealt with	157
Number of loans guaranteed	469
Number of applications withdrawn or rejected	204
Number of applications awaiting inspection	99
Total amount guaranteed during 1918	\$ 564,480.00
Total amount guaranteed during 1918	\$1,008,500.00
Average amount of each loan	\$2,150.00
Total number of borrowers	2480
Average amount loaned to each borrower	\$407.00
Number of cattle purchased in 1918	9329
Average price per head	\$65.50
Number cattle purchased between April 1st, 1917 and December 31st, 1918	12,875
Number of seizures of cattle	3
Number of herds transferred	43
Number of animals sold because of being unsatisfactory for any reason	140
Amount of interest due during 1918	\$30,517.00
Amount of interest paid during 1918	\$24,093.00
Amount of interest delinquent	\$6,424.00

ROUND-UP OF STRAY HORSES.

On the first day of June, 1918, a Ministerial Order was issued directing the writer to make a round-up of stray horses in the following described area. To Wit:

South of the main line of the Canadian Pacific Railway and north of the Bow River between the City of Medicine Hat and the City of Calgary; also in that portion of the Province lying south of the Bow River, north of township 17, between ranges 17 and 26, W. 4th Meridian.

On the second day of June the writer, accompanied by his Chief Clerk, Mr. Norman Steckle, and Marston Sexsmith, Stock Inspector, proceeded to Bassano, and on the day following proceeded to the Burns Horse Ranch. Here he was informed that all of the ranchers in that vicinity had completed their round up, and turned out all the strays they had found in their bunches. He proceeded west, and found the same situation existed until he reached the McHugh Ranch. Here he found a bunch of 47 head of strays about to be turned loose. These were taken



BERKSHIRE AND YORKSHIRE FEMALES AT EDMONTON

over, and the brands read and advertised. On June 4th 10 head, and on June 5th 15 more, were brought in by the McHugh outfit, and 17 head were brought in by Thomas Huckvale of the Alberta Provincial Police on June 8th. On June 10th, 15 head, on June 13th, 23 head, and on June 17th, 12 head were brought in by McHugh.

Arrangements were made with the Indian Agent on the Blackfoot Reserve for pasturage and use of corral while holding the animals, and James Clements, Assistant Live Stock Commissioner, placed in charge.

The results of this round-up are as follows:

Number of head captured	139
Number of head claimed	69
Number of head escaped	30
Number of head died	2
Number of head held by the Alberta P. P.	2
Number of head sold	56

FINANCIAL STATEMENT.

Receipts from animals claimed	\$ 478.75
Receipts from animals sold	1,253.00
DISBURSEMENTS:	
For advertising	390.00
Wages and board for riders	396.00
Stabling for saddle horses	200.00
Auctioneer's fees	50.00
Sundries	158.75
Balance held in trust	247.05

REPORT OF THE DAIRY COMMISSIONER.

SIR,—I have the honour to submit herewith the report of the Dairy Commissioner's Branch for the year ending December 31st, 1918, under the following heads:

- I.—General
- II.—Creameries and Cheese Factories.
- III.—Marketing of Creamery Butter.
- IV.—The Department's Butter Grading Service.
- V.—Educational Butter Scoring Contest.
- VI.—Instruction Work.

CREAMERY BUTTER AND FACTORY CHEESE.

According to the statistical returns received from the creamery operators of the Province the output of creamery butter for the year was 9,053,237 pounds, as compared with a production of 8,943,978 pounds in 1917. The cheese factory operators reported 552,834 pounds of factory-made cheese as against an output of 1,274,905 pounds in 1917.

The large reduction in the cheese output during the year was mainly due to the fact that the market price for cheese was relatively smaller than the price for butter. Besides, the high price ruling for live stock gave added value to skim milk as feed for young animals on the farm.

It was generally expected in the early part of the season that the butter and cheese production would be considerably smaller than that of the previous year on account of the high cost and, in many sections, scarcity of both help and suitable feed for profitable dairy operations. The results show, however, that even under such trying conditions the dairy production was on the whole well maintained.

The producer had the advantage of a rising market for his product throughout the year and a comparatively high price elevation was reached, especially for creamery butter. If we take as a basis the summer season's figures from the Department's butter marketing service we find that the price realized for creamery butter sold at Calgary and to the wholesale trade, during the period from May 1 to September 29, 1918 (45.3 cents per pound) was:

- 14.5 per cent. higher than the price obtained in 1917.
- 13.9 per cent. higher than the price obtained in 1916.
- 66.6 per cent. higher than the price obtained in 1915.
- 75.1 per cent. higher than the price obtained in 1914.

The comparative prices realized from the sale of cheese at the factories were as follows: 22 cents per pound in 1917, 20.7 cents per pound in 1916, and 17.9 cents per pound in 1915.

NEW DAIRY LEGISLATION.

Several important provisions were added to The Dairymen's Act in the amendment made at the 1918 session of the Legislature. The new

provisions will have a stabilizing influence upon the commercial side of the dairy business of the Province. They will encourage efficiency in the handling and manufacture of the products which are put up and disposed of in competitive markets; they will promote fair competition among the manufacturers of dairy products and a due recognition of the interests of the producer—the dairyman on the farm.

Regulations were made under the Act for the examination and licensing of testers of milk and cream in creameries, cream stations and cheese factories and 303 licenses were issued during the year to testers who had passed a satisfactory examination.

Regulations were also made on the 25th day of October to establish commercial grade standards and grade descriptions of cream. A copy of these regulations follows:

MINISTERIAL ORDER DEFINING GRADE STANDARDS AND GRADE
DESCRIPTIONS OF CREAM UNDER THE PROVISIONS OF SECTION
47 OF THE DAIRYMEN'S ACT.

TABLE CREAM.

This grade shall include any lot of sweet, clean flavored cream bought for re-sale for household use and which is produced under conditions that comply with the special requirements of the municipality in which it is to be sold for consumption. The term "Table Cream" may be supplemented by the terms "Inspected" or "Extra Special" as the initial purchaser may in each case uniformly adopt.

SPECIAL GRADE.

This grade shall include any lot of cream which is fresh and clean in flavor, of a uniform consistency and fit for making into Special Grade butter. The acidity of cream in this grade shall be not more than .2% (two-tenths of one per cent.) at the time of being graded at a cream station and not more than .3% (three-tenths of one per cent.) at the time of being graded at the creamery where it is to be manufactured into butter.

FIRST GRADE.

This grade shall include any lot of cream which is reasonably fresh and clean in flavor, of a uniform consistency and fit for making into butter of this grade without the addition of acid neutralizing agents. Its acidity shall not be more than .4% (four-tenths of one per cent.) at the time of grading at a cream station and not more than .5% (five-tenths of one per cent.) at the time of grading at the creamery where it is to be manufactured into butter.

SECOND GRADE.

This grade shall include any lot of cream that does not meet the requirements specified for the next higher grade; which is bitter, stale, musty, metallic or otherwise unclean in flavor.

The above Grade Standards and Descriptions of cream shall be effective on and from November 15th, 1918.

DUNCAN MARSHALL,

Oct. 25, 1918.

Minister of Agriculture.

COMMANDEERING OF CREAMERY BUTTER.

Under Order-in-Council 2402, the Dominion Government commandeered the creamery butter that was manufactured during the period of six weeks beginning September 30th last. The following quotation of a press dispatch dated at Ottawa summarizes the situation:

"OTTAWA, September 30.—All creamery butter made in the provinces of Alberta, Saskatchewan, Manitoba and Quebec, between the 30th day of September and the 9th day of November, 1918, both days inclusive, will be commandeered under the authority of an order-in-council passed Monday, September 30th, 1918.

"The reason for this action is that Great Britain and her allies need Canadian creamery butter. The British Ministry of Food urgently asks Canada to increase her shipments of creamery butter.

"One-half pound of butter or oleomargarine per month per person is the allowance in Great Britain today. The order-in-council puts Canadian consumers on a creamery butter allowance of two pounds of butter per person per month, as compared with the half-pound allowance in Great Britain.

"For months Great Britain and her allies have been short of butter, and this condition bids fair to continue, as Atlantic tonnage is needed for transporting troops and supplies. Food-stuffs in Canada for export must be assembled at ocean ports to take advantage of space whenever offered.

"The principle of the common table for all forces fighting the Huns is the basis of the order-in-council limiting the consumption of creamery butter. Canadians will not have to go without butter, but they are now asked to eat less of it."

Following is a copy of the order as received from Ottawa:

"1. Manufacturers of creamery butter shall deliver all such butter made in the Provinces of Alberta, Saskatchewan, Manitoba, Ontario and Quebec between 30th September and 9th November, 1918, both days inclusive, to a Cold Storage Warehouse at Montreal designated by the Dairy Produce Commission at the following prices:

Grade No. 1	46½c per pound
Grade No. 2	46c per pound
Grade No. 3	45c per pound

delivered at warehouse, Montreal, freight and cartage paid.

"2. No person shall sell to the Dairy Produce Commission any creamery butter manufactured before 30th September, 1918, at a price in excess of the following:

Grade No. 1	43½c per pound
Grade No. 2	43c per pound

delivered at warehouse, Montreal, freight and cartage paid.

"3. Every manufacturer of creamery butter in the Provinces of Alberta, Saskatchewan, Manitoba, Ontario and Quebec shall make weekly returns to the Canada Food Board showing the quantity of butter manufactured by them, the names of persons to whom sold and the quantities and prices of each sale during the week and the quantity on hand at the end of the week.

"4. No person, except a dealer licensed by the Canada Food Board to deal in butter, shall hold or have in his possession or under his control at any one time, creamery butter more than is sufficient for his ordinary requirements for a period not exceeding thirty days.

"5. No person shall sell to any person except to a dealer licensed by the Canada Food Board to deal in butter, more creamery butter than is sufficient for his ordinary requirements for a period not exceeding thirty days.

"In this and the last preceding section, "Thirty days" requirements, shall not exceed two pounds of butter for each member of the household.

"Nothing herein contained shall apply to butter purchased for private consumption before the passage of this Order."

In order that the standard grades and type of Alberta creamery butter might become better known to the export trade in Eastern Canada and possibly in some markets in Great Britain as well, I addressed the

following letter to the creamery operators in the Province who had used the Department's butter grading service during the season, having first obtained the consent of the Canada Food Board to receive samples of commandeered butter for grading. These samples were afterwards to be repacked into standard export packages and, at the close of the period, forwarded to the Government's Dairy Produce Commission.

"I understand that you have received a copy of Order-in-Council No. P.C. 2402, passed at the instance of the Canada Food Board, commandeering all creamery butter to be made in Alberta and certain other provinces of Canada between the 30th day of September and the 9th day of November, 1918.

"Although the butter so commandeered will be paid for on the basis of the Dairy Produce Commission's inspection, as to weight and grade, I would suggest that you continue the systematic numbering and records of individual churnings, as in the past, as well as to furnish grading samples to the Department's Butter Grading Service."

This suggestion is based upon the following reasons:

"1. The commandeering Order is but a passing incident in our dairy industry and should not be permitted to dislocate, even temporarily, any of the relations and services which have been found not only useful but essential in the satisfactory development of the industry.

"2. The probability is that in consigning butter for the Dairy Produce Commission's account the invoicing by number of packages from individual churnings under the classification of 'Specials,' 'Firsts' and 'Seconds,' with grade certificates attached, will facilitate the work of inspection at Montreal. The receiving firms as designated by the Dairy Produce Commission will also, in that way, get an opportunity to become familiar with our grades and grade standards and this in itself may become a valuable help to future business in Alberta creamery butter in the Montreal market."

Since the commandeered butter would be paid for upon the basis of the Dairy Produce Commission's own inspection, the majority of the creamery operators addressed did not accept our offer. They considered that it would involve needless trouble and expense.

To facilitate car load shipment to Montreal of less than car load lots of commandeered butter I wrote the following letter on October 9, to the creamery operators who had used the Department's Butter Marketing Service during the season:

"I understand that you have received a copy of the Order-in-Council No. P.C. 2402, passed at the instance of the Canada Food Board, commandeering all creamery butter to be made in Alberta and certain other provinces between the 30th day of September and the 9th day of November, 1918.

"Assuming that you prefer to continue shipping your butter production to the Department we shall undertake to make up car lots of the commandeered butter and forward to Montreal from this point, giving with each invoice the quantity, description and Grade Certificates of the butter furnished by each creamery.

"During the period in question and on the basis of the prices named in the Order-in-Council we shall make advance payments upon receipt of each shipment as follows:

42c per lb. for Specials.
41c per lb. for Firsts.
40c per lb. for Seconds.

"At the close of the season a separate statement will be rendered covering the commandeered butter."

The table which follows shows the details of the butter so received and forwarded:

COMMANDEERED BUTTER—SEPT. 30TH-NOV. 9TH, 1918.

Creamery or Shipper	Pounds of Butter Forwarded	Revenue at Calgary	Average Price per Pound Cents
The D. Morkeberg Creamery Co., Limited:			
Elnora	6,832	\$ 2,969.77	43.47
Innisfail	2,688	1,168.63	43.47
Markerville	10,584	4,600.31	43.46
Red Deer	3,528	1,534.30	43.49
Lacombe	6,152	2,674.07	43.47
Viking Co-operative Creamery Association	14,560	6,328.68	43.47
Beaver Lake Farmers' Creamery Association	5,320	2,314.22	43.5
Hanna Creamery	7,560	3,288.32	43.5
Red Deer Dairy Products, Ltd.	21,219	9,214.54	43.43
K. Kerr, Bentley	3,038	1,320.80	43.48
Colin Thomson, Red Lodge	280	121.88	43.53
Totals and Average	81,761	\$35,535.52	43.46

At the beginning of the commandeering period I was asked by a member of the Dairy Produce Commission to furnish an estimate of the quantity of butter that would likely come out of Alberta under the Order and after making a careful estimate, reported that upon the basis of a normal output for the six weeks there should be 750,000 pounds. The summary issued by the Dairy Produce Commission shows that the total shipments from Alberta amounted to 13,435 packages of 56 pounds each, which, it will be seen, slightly exceeded my estimate.

I refer to this detail here for the reason that upon the issue of the Commandeering Order it was thought that when the creameries were prevented from filling orders in their regularly established home trade there would spring up a large demand for, and a corresponding increase in the price of butter made in the home dairy and that many of the creamery patrons would avail themselves of this situation by withdrawing their patronage from the creameries and making butter at home for the local market. While this was done to some extent the vast majority of the farmers stayed with the creameries and enabled them to even exceed the estimate that had been made of their production. The following table made up from data furnished by the Dairy Produce Commission, shows the relative quantities and grading (by the Commission's Inspectors) of the butter furnished by each of the Provinces affected by the Commandeering Order:

Province	Total Packages (56 lbs. each)	Percentage Grading No. 1
Ontario	45,125	70.73
Quebec	39,937	94.48
Alberta	13,435	90.26
Manitoba	10,021	81.11
Saskatchewan	7,036	71.66
Total and Average	115,554	82.17

DOMINION DAIRY CONFERENCE.

In October last the Dominion Department of Agriculture called a conference at Ottawa of representatives of the different branches and interests of the Dairy Industry. The conference was called for the purpose of discussing some of the more important questions and problems that are now facing the industry and for the adoption of recommendations looking towards a general improvement in the conditions surrounding the production and marketing of dairy products.

Delegates were invited from the different Provinces of the Dominion representing both the producers and the manufacturers of dairy products as well as the several Departments of Agriculture and Dairy Schools. The creamery and cheese factory operators of Alberta selected as their representatives Mr. P. Pallesen, Managing Director of The Central Creameries, Ltd., Calgary, and Mr. E. T. Love, Manager of The Woodland Dairy, Ltd., Edmonton. The Department of Agriculture was also invited to send a representative and it was my privilege to go in that capacity and to be invited to introduce the discussion upon the subject "Commercial Grading of Dairy Products—definitions and standards." I was also asked to give a demonstration and explanation of the Storch Test as applied to butter.

The Conference was undoubtedly the most representative of its kind that has been held in Canada. The timely nature of the topics selected for consideration and the unanimity which marked the discussions throughout under the chairmanship of Mr. J. A. Ruddick, Dairy and Cold Storage Commissioner, enabled the conference to formulate a number of well defined recommendations, the general adoption of which should prove to be of great service to the dairy industry of Canada. The discussions and recommendations covered the following subjects:

- (1) Legal Standards of milk and its products.
- (2) Commercial Grade Standards of butter, cheese and cream.
- (3) The formation of a National Dairy Council.
- (4) The pasteurization of cream for butter making.
- (5) The compulsory pasteurization of dairy by-products.
- (6) Dairy Sires.
- (7) The taking of milk samples.
- (8) Market investigations.
- (9) Paying for milk by test.
- (10) Releasing soldiers.
- (11) Oleomargarine.

BUTTER GRADERS' CONFERENCE.

The second Interprovincial Buttergraders' Conference was held at Edmonton, Alberta, on Friday, February 22nd, 1918, following the Provincial Dairy Convention.

The following were in attendance:

- Geo. H. Barr, Chief of the Dairy Division, Ottawa.
 D. A. Gibson, Dairy Commissioner, Manitoba.
 J. A. MacDonald, Dairy Produce Grader, Manitoba.
 F. M. Logan, Dairy Commissioner, Saskatchewan.
 Prof. K. G. MacKay, Dairy Produce Grader, Saskatchewan.
 H. J. Crowe, Dairy Produce Grader, Saskatchewan.
 T. A. F. Wiancko, Chief Dairy Instructor, British Columbia.
 J. R. Flan, Dairy Produce Grader, Alberta.
 H. S. Pearson, Dairy Produce Grader, Alberta.
 Geo. W. Scott, Dairy Produce Grader, Alberta.
 C. Marker, Dairy Commissioner, Alberta.



MILKING SHORTHORN FRIESIAN AT THE INTERNATIONAL.

In opening the Conference, C. Marker extended to the visiting officials a hearty welcome to Alberta and expressed the hope that such conferences may be arranged, from time to time, so as to promote the efficiency of the grading work and the uniformity of the official grade standards in the several Provinces.

At the invitation of the Chairman, Professor R. M. Washburn, of the University of Minnesota, St. Paul, Minn., who was present, addressed the Conference briefly, expressing his pleasure in having been able to attend the Provincial Dairy Convention and this Conference. He commended the dairymen of Western Canada upon the line of progress which they have laid out for themselves and which they are evidently pursuing with a singleness of purpose. Such work, he thought, could not but result in the general betterment of the industry in Western Canada. Prof. Washburn took an interested part in the proceedings of the Conference.

Mr. Geo. H. Barr was next invited to take charge of the more practical part of the Conference, namely, the consideration of Grade Standards in relation to a number of packages of creamery butter on display. By reason of his position Mr. Barr was deemed to be the proper person to direct this particular part of the Conference. It was interesting to note during the subsequent discussion on each of these packages of butter that the several graders' judgment as to Grade Standards and Descriptions practically coincided, notwithstanding the fact that the several graders of Manitoba, Saskatchewan and Alberta had been doing their work at their own posts without reference to or consultation with the others since May, 1916.

A discussion developed also upon several points in connection with the Butter Score Card, and it was generally agreed that it would be desirable to adopt a uniform Score Card for the three Provinces. The Score Card used in Alberta and Manitoba being identical, Mr. Logan expressed the opinion that Saskatchewan would probably adopt a similar form.

C. Marker discussed briefly some observations that he had made regarding the relative keeping qualities of butter made from pasteurized and from raw cream. He pointed out that the instability of the latter was such that his department would no longer issue negotiable Score Cards (in lieu of Grade Certificates) on such butter. He pointed out that in numerous cases high scoring raw cream butter had been found to develop fishy and other objectionable flavors within the short period of three weeks after being originally scored and placed in cold storage.

The party then adjourned to the Government Butter Grading Station at the Edmonton Cold Storage. Mr. Ducloux, the Manager of the Cold Storage, conducted the party through his establishment, particularly the butter rooms. Demonstrations were afterwards given at the Butter Grading Station by the Alberta graders in the testing of butter for acidity and for pasteurization. The Storch Test was used in the latter case.

PERSONAL WORK OUTSIDE OF THE PROVINCE.

By request of the Exhibition Companies, and by the Minister's permission, I acted as judge of dairy products at the annual Provincial Exhibition held at Regina, Sask., Brandon, Man., and Vancouver, B.C.

I also was one of the judges of the Season's Creamery Butter Contests which was held under the auspices of the Dairymen's Associations of Saskatchewan and British Columbia. I delivered addresses at the annual Dairy Convention at Saskatoon, Winnipeg and Fargo, N.D. At the latter place I spoke by special request upon the work that had been done in Alberta in the grading of cream and of creamery butter.

The faculty of Agriculture of the Iowa State College, Ames, Io., asked the Department that I be allowed to go down and deliver two lectures to the Short Course of creamery managers and buttermakers held in the Dairy Department of that splendid institution during the early part of February. My subject was, "The Standardization of Creamery Butter." Prof. M. Mortensen of the Iowa State College came to Alberta in the autumn of 1917 to look into our methods of quality basis marketing of cream and creamery butter.

I appreciate very much the opportunity that was given me on this trip to make a short visit to the Dairy Schools of North Dakota, Iowa and Minnesota, and to meet the administration heads in the dairy work of those States. The work done by such men takes on a new significance when one meets them personally and I certainly benefited by the acquaintanceships formed.

II.—CREAMERIES AND CHEESE FACTORIES.

There were 13 Cheese Factories and 66 Creameries in operation in the Province during the year 1918. The following list gives particulars as to location and ownership.

<i>Name of Factory</i>	<i>P.O. Address</i>	<i>Proprietor or Manager</i>
<i>Cheese Factories.</i>		
Mountain View Cheese Factory	Mountain View	S. W. Low, Mgr., Cardston
Legal Cheese Factory	Legal	A. Carriere, Secretary
Calmar Cheese Factory	Calmar	A. F. MacKenzie, Prop., Edmonton, South
Olds Central Cheese Factory	Olds	The Central Creameries, Ltd., Calgary
Wild Rose Cheese Factory	Ponoka	The Edmonton City Dairy, Ltd., Edmonton
<i>Combined Creameries and Cheese Factories.</i>		
Campbell & Griffin Creamery	Calgary	Campbell & Griffin, Ltd., Calgary
Crystal Dairy	Didbury	The Crystal Dairy, Ltd., Calgary
Woodland Dairy, Ltd.	Edmonton	The Woodland Dairy Ltd., Edmonton
Edmonton City Dairy	Edmonton	The Edmonton City Dairy, Ltd., Edmonton
Wetaskiwin Creamery	Wetaskiwin	The Edmonton City Dairy, Ltd., Edmonton
Olds Co-operative Creamery	Olds	The Olds Co-operative Creamery Association, Ltd.
Red Deer Dairy Products	Red Deer	The Red Deer Dairy Products, Ltd., Red Deer
Clover Hill Creamery	Didbury	R. LeBlanc

<i>Name of Factory</i>	<i>P.O. Address</i>	<i>Proprietor or Manager</i>
<i>Creameries.</i>		
Meadow Creamery	Alix	The Meadow Creamery Co., Ltd.
Bentley Creamery	Bentley	Kenneth Kerr
Carlyle Dairy	Calgary	The Carlyle Dairy Co.
Hays Dairy	Calgary	Hays & Co., Ltd.
Co-operative Dairy	Calgary	Drake & Derby
White Swan Creamery	Bowden	The Red Deer Dairy Products, Ltd., Red Deer
Pine Lake Creamery	Pine Lake	The Red Deer Dairy Products, Ltd., Red Deer
Calgary Central Creamery	Calgary	The Central Creameries, Ltd.
Camrose Central Creamery	Camrose	The Central Creameries, Ltd.
Eckville Central Creamery	Eckville	The Central Creameries, Ltd., Calgary
Cardston Creamery	Cardston	The Cardston Creamery Association
Chief Mountain Creamery	Cardston	The Chief Mountain Creamery Co., Ltd.
Carmangay Creamery	Carmangay	C. H. Messenger
Claresholm Creamery	Claresholm	The Claresholm Creamery Association
Cochrane Creamery	Cochrane	The Cochrane Creamery Association
Coronation Creamery	Coronation	A. E. Kofoed
Twin Spruce Creamery	Elkton	A. R. Kendrick, Didsbury
Daysland Creamery	Daysland	The Edmonton City Dairy, Ltd., Edmonton
Delburne Creamery	Delburne	The Edmonton City Dairy, Ltd., Edmonton
Ferintosh Creamery	Ferintosh	The Edmonton City Dairy, Ltd., Edmonton
Grande Prairie Creamery	Grande Prairie	The Edmonton City Dairy Ltd., Edmonton
Riviere Qui Barre Creamery	Riviere Qui Barre	The Edmonton City Dairy Ltd., Edmonton
Stettler Creamery	Stettler	The Edmonton City Dairy, Ltd., Edmonton
Vermilion Creamery	Vermilion	The Edmonton City Dairy, Ltd., Edmonton
Enterprise Creamery	Edmonton	The Enterprise Dairy, Ltd.
Brookfield Creamery	Edmonton	The Swift Canadian Co., Ltd. (Creamery Department)
Northern Creamery	Edmonton	The Northern Creameries, Ltd.
Hanna Creamery	Hanna	L. W. Kofoed
Lacombe Creamery	Lacombe	The Dan Morkeberg Creamery Co., Ltd., Markerville
Innisfail Creamery	Innisfail	The Dan Morkeberg Creamery Co., Ltd., Markerville
Markerville Creamery	Markerville	The Dan Morkeberg Creamery Co., Ltd., Markerville
Elnora Creamery	Elnora	The Dan Morkeberg Creamery Co., Ltd., Markerville

<i>Name of Factory</i>	<i>P.O. Address</i>	<i>Proprietor or Manager</i>
<i>Creameries—(Continued).</i>		
Red Deer Creamery	Red Deer	The Dan Morkeberg Creamery Co., Ltd., Markerville
Mayton Creamery	Mayton	J. H. Cameron
Crystal Dairy	Letbridge	The Crystal Dairy, Ltd., Calgary
Crystal Dairy	Medicine Hat	The Crystal Dairy, Ltd., Calgary
Macleod Creamery	Macleod	The Southern Alberta Creamery Co., Ltd.
Magrath Creamery	Magrath	The Magrath Creamery Association
O. K. Creamery	Morningside	The O.K. Creamery Co.
Red Lodge Creamery	Red Lodge	Colin Thomson
Blindman Valley Creamery	Rimbey	A. M. Kerr
Beaver Lake Farmers' Creamery	Riley	The Beaver Lake Farmers' Creamery Association
C.P.R. Dairy	Strathmore	The C. P. R. Demonstration Farm
Knee Hill Creamery	Sunnyslope	Nelson & Barron
St. Paul Creamery	St. Paul des Metis	Geo. E. Scott
Hartshorn Creamery	Hartshorn	Ralph Barron
Viking Creamery	Viking	Viking Co-operative Creamery Association
Meadow Creamery	Wainwright	The Meadow Creamery Co., Ltd.
Water Lily Creamery	Mound	The Water Lily Co-operative Creamery, Ltd. (Sundre)

New cheese factories were built and put into operation during the year at Legal and Calmar. The six factories that were operated in 1917 at the following points did not re-open, viz: Bulford, Pickardville, Raven, Kausamo, Winterburn and Rossington.

A new creamery was started at Cardston by the Chief Mountain Creamery Co., Ltd. The creamery at St. Paul des Metis was again opened, under new management, and the plant that was operated at Stonelaw in 1917 was moved to Hartshorn in order to get closer to the cream supply. The eight creamery plants situated at Ashmont, Calgary (The H.B. Co.), Clive, Quarrel, High River, Pincher Creek, Spring Lake and Vegreville, did not re-open during the year though the latter continued as a cream shipping station. Of the combined creameries and cheese factories reported in 1917 the one located at Ferry Bank was dismantled.

III.—MARKETING OF CREAMERY BUTTER.

This is a service which has been carried on every year since the Department was established and the volume of business handled during recent years has ranged from eight to ten per cent. of the total creamery butter production. Through the Marketing Service the Department has been able to keep in close touch with the general market and its requirements and it is one of the agencies by which it has been found practicable to establish and maintain satisfactory commercial grade standards and uniform grading.

Tables I and II give the particulars of the business handled through the Marketing Service for both winter and summer seasons. The names are given of the creamery organizations which have availed themselves of the service, the quantity of butter handled for each and the selling price at Calgary. Regarding the latter point the variations in the average price realized per pound are due to the relative grades and comparative quantity of butter furnished by each at different parts of the season. In one case the wide difference is due to more expensive packages having been used in putting up the butter for a special market.

Owing to the order commandeering creamery butter by the Dominion Government the summer season's marketing was confined to the months of May-September inclusive. On this account the turnover is somewhat under that of last year.

TABLE I.

SUMMARY OF BUTTER SALES—WINTER SEASON 1917-18.

Creamery or Shipper	Pounds of Butter Sold	Selling Price at Calgary	Average Price per Pound Cents
The D. Morkeberg Creamery Co. Limited:			
Elnora	15,863	\$ 7,253.06	45.72
Innisfail	8,003	3,558.73	44.47
Markerville	29,009	13,483.48	46.48
Red Deer	15,847	7,225.63	45.59
Lacombe	3,610	1,771.33	49.07
Cardston Creamery Association	25,700	11,166.38	43.45
Viking Co-operative Creamery Association	24,833	11,517.05	46.38
P. Pallesen	1,000	465.00	46.50
Totals and Average	123,865	\$56,440.66	45.57

TABLE II.

SUMMARY OF BUTTER SALES—SUMMER SEASON, 1918.

Creamery or Shipper	Pounds of Butter Sold	Selling Price at Calgary	Average Price per Pound Cents
The D. Morkeberg Creamery Co., Limited:			
Elnora	43,371	\$ 19,383.97	44.69
Innisfail	25,748	11,691.28	45.41
Markerville	84,148	38,244.44	45.45
Red Deer	26,040	11,810.68	45.36
Lacombe	59,254	22,485.98	44.74
Viking Co-operative Creamery Association	102,816	46,575.48	45.30
Central Creameries, Ltd., Calgary	82,232	39,024.38	47.45
A. E. Kofoed, Coronation	49,881	17,817.61	43.58
Cardston Creamery Association	39,536	17,526.32	44.33
Beaver Lake Farmers' Creamery Association	15,736	6,962.76	44.25
Meadow Creamery Co., Ltd., Alix	7,000	3,082.24	44.03
Hanna Creamery	2,225	940.81	42.29
Totals and Average	519,987	\$235,542.95	45.30

Before leaving this subject it will be interesting to note the course of the prices per pound realized at Calgary by the Butter Marketing Service during the summer seasons of the past five years. While these figures may not exactly express the average selling prices of all the creamery butter of Alberta sold to the wholesale trade during these periods they should be fairly representative.

The vertical columns show, season by season, the "spread" in the prices between the various grades. No better argument could be made for quality basis marketing.

Grades	1914	1915	1916	1917	1918
	Cents	Cents	Cents	Cents	Cents
Specials	26.87	27.96	32.	39.67	46.13
Firsts	24.78	26.52	29.79	39.14	44.37
Seconds	24.49	24.24	28.66	36.32	41.93
Off Grades	18.	23.22	26.57	.....	41.00
Average	25.87	27.18	31.49	39.56	45.30

IV.—THE DEPARTMENT'S BUTTER GRADING SERVICE.

I am pleased to report that an annually increasing proportion of the creamery butter output comes within the scope of this service and that from an educational point of view its influence makes itself felt more and more. With a few unimportant exceptions, the men in the wholesale produce trade in Western Canada demand Grade Certificates with every purchase of butter, the price differential between the different grades being agreed upon by both parties to the transaction. This principle makes for mutually satisfactory trade and the preference of the market, in dollars and cents—and satisfaction, is passed along by the creamery operator to the dairyman on the farm in the form of payment for cream on a quality (grade) basis.

Any creamery operator who wishes to use the Department's butter grading service is asked to enter into a formal agreement by which he undertakes to grade and classify all cream received from his patrons according to the grade standards established under authority of The Dairymen's Act and to pay for the butterfat in each grade a price which represents its relative market value. This same provision has also been inserted in the form of agreement covering the marketing of butter by the Department.

The following table shows the development of the grading service during the past three years. The figures cover the work during the summer seasons only:

1915	6,203	Lots graded, representing	3,600,900	pounds
1916	6,953	Lots graded, representing	4,214,312	"
1917	7,916	Lots graded, representing	4,644,616	"
1918	7,281	Lots graded, representing	5,427,134	"

V. SEASON'S BUTTER SCORING CONTEST.

Following are the winning creameries and buttermakers in the Educational Butter Scoring Contest which has been conducted by the De-

partment of Agriculture for many years. The awards in the form of trophy, gold medal and a number of silver medals suitably inscribed are shown opposite to the average score in points, in respect of each creamery.

Creamery	Buttermaker	Average Score Points	Awards
Central Creameries, Ltd., Calgary	O. Seversen	96.09	Trophy and Gold Medal
Markerville	F. J. Young	95.72	Silver Medal
Innisfail	H. Hansen	95.66	" "
Viking Creamery	J. J. Skalitzky	95.64	" "
Red Deer	A. A. Munro	95.42	" "
Central Creameries, Ltd., Eckville	A. Seversen	95.36	" "
Edmonton City Dairy, Ltd., Edmonton	C. E. Christensen	95.30	" "
Woodland Dairy, Ltd., Ed- monton	F. S. Wilson	95.2	" "
Swift Canadian Co., Ltd., Edmonton	J. Van Dam	95.17	" "
Edmonton City Dairy, Ltd., Wetaskiwin	R. W. Farmer	95.11	" "
The Dan Mørkeberg Cream- ery Co., Ltd., Elnora	P. J. Martin	94.75	" "
Edmonton City Dairy, Ltd., Daysland	G. A. Anderson	94.73	" "
Central Creameries, Ltd., Camrose	Carl Anderson	94.70	" "
Cochrane Creamery Ass'n., Cochrane	J. W. Loughery	94.25	" "

VI.—INSTRUCTION WORK.

The instruction work in dairying at the several Schools of Agriculture was again committed to this branch. Mr. Geo. W. Scott had charge of the classes in dairying and poultry husbandry at the school at Vermilion and Mr. H. S. Pearson, assisted by Mr. W. J. Beckett, conducted the dairy instruction at the schools at Olds and Claresholm.

The new provisions of The Dairymen's Act, requiring the examination and licensing of milk and cream testers, made a heavy demand upon the instructors during the latter half of May and early part of June when testers' examinations were held at a number of points throughout the dairy districts of the Province.

By reason of the difficulty some of the creamery operators had in securing capable help to operate some of their cream stations they found themselves obliged to appoint as agents in charge a number of men who had had little, if any, previous training and experience in the handling and testing of cream. Considerable time had to be spent, therefore, by the dairy instructors at the time of their visits in coaching these inexperienced agents in the more elementary part of the work they were called upon to do. In order that each licensee might familiarize himself with the requirements of The Dairymen's Act and Regulations copies of these were furnished to him and also a comprehensive bulletin dealing with the testing of milk and its products, published by the Dairy and Cold Storage Commissioner's Branch of the Department of Agriculture, Ottawa.

We secured a valuable addition to the staff in the appointment of Mr. Walter Hamilton as dairy instructor. He is an expert cheese maker and has had considerable experience as an instructor in the Province of Ontario.

Respectfully submitted,

C. P. MARKER.

Dairy Commissioner.

REPORT OF THE SUPERINTENDENT OF FAIRS AND INSTITUTES.

SIR,—I have the honour to submit herewith the report of the Superintendent of Fairs and Institutes for the year 1918.

EXHIBITIONS AND FAIRS.

Splendid weather favorably affected the attendance at nearly every fair held in the Province during 1918. In point of fact, only one fair had to be postponed on account of rain—seventy-nine out of eighty fairs being favored with most beautiful weather—a remarkable tribute to the climate of Alberta. There are now one hundred and ten agricultural societies and exhibition associations in the Province, of which number no fewer than thirty dropped out from holding a fair on account of scarcity of help and other war exigencies. The eighty fairs held, however, were quite above the usual in merit, interest and attendance. The quality and conditions of the stock exhibited were fairly good—in some cases quite superior. Competition generally was keen in most of the live stock sections, although in a few cases the judges felt compelled to refuse first prize honours to animals where competition was unusually light and the animals not sufficiently meritorious to justify higher awards. If exhibitors would pay more attention to the condition of their stock and have them properly halter-broken before entering the ring it would facilitate matters greatly and enable the judges to work with greater safety and satisfaction. Forty-four judges were employed during the season and their awards met with almost unanimous approval.

A very noticeable improvement was observed at certain fairs last season where by the introduction of fresh blood into the directorate or by the awakening of some of the officers to a new sense of their duties a degree of enthusiasm was produced that had most satisfactory results. Conspicuous in this class of "resurrected" fairs are those of Taber, Olds, and several others.

Excellent fairs of the smaller class were also held in Delia, Youngstown, Oyen, Munson, Coronation, Consort, Viking, Innisfree, Crossfield, Dunstable, Westlock and Rocky Mountain House, while Milnerton put up a splendid show and as usual was managed as an agricultural fair ought to be. Of the larger exhibitions, Calgary and Edmonton, of course, towered above all the others, and favored by superb weather, both these exhibitions attained high level marks in point of general interest, management, quality, and number of exhibits, and attendance. Camrose fairly outdid itself in attendance, but both there and at Red Deer it has become absolutely necessary that rings for both cattle and horses be provided before another fair season. The fair ground, especially at Camrose, was badly congested. Lloydminster and Vermilion also deserve honourable mention for the character of their fairs in 1918. Both are in the truest sense of the word progressive and deserving of encouragement and support. In both these places conditions of success would justify some expansion in equipment in permanent buildings in moderate

degree each year. Some of the smaller fairs, especially in the south, suffered severely from the poor crops and corresponding depression.

Now that the European struggle for humanity and freedom has been victoriously won and the Canadian soldiers are returning to their homes, the scarcity of help on the farms which has been so keenly felt during the last few years will be relieved and the agricultural fairs of next and the following seasons will undoubtedly benefit accordingly.

FAT CALF AND BABY BEEF COMPETITION.

At Edmonton in April and at Calgary in December there were most interesting exhibits of calves of the various beef breeds shown by the boys and girls who had fed them. Large entries were made and many of the animals shown were of outstanding merit. At Edmonton last April there were no fewer than sixty-nine entries and sixty-one calves actually appeared in the contest. Fifteen prizes were awarded, ranging from the first prize of one hundred and ten dollars down to twenty-five dollars. There were also a good many special prizes of considerable value, donated by private individuals. The same classes at Calgary in December were equally successful and although the influenza was raging badly at that time public interest was manifested in exactly the same manner. The Calf Competition will now become an annual and very important feature of the programme at both Calgary and Edmonton Shows. It is one of the most beneficial, as well as the most interesting, classes ever added to the prize lists and is an important phase of a general tendency in favor of making the educational value of fairs relate to people at a susceptible age.

POULTRY SHOWS.

Very successful exhibitions of poultry were held during November, December, and January at Calgary, Edmonton, Medicine Hat, Lethbridge, Wetaskiwin and Ogden. The judges who officiated at these shows



CHAMPION STEER AT EDMONTON SPRING SHOW

HORTICULTURAL SHOWS.

were: Richard Oke, of London, Ontario; George Wood, of Winnipeg, Manitoba; J. Haden, of Calgary; H. Ross Wallace, of Calgary; Jas. Shackleton, of Edmonton; H. Smith, of Carstairs; E. N. Barker, of Cardston; J. H. Westbrook, of Lethbridge; and H. A. Ross, of Lathom.

Horticultural Shows were held during the past season at Red Deer, Calgary, Medicine Hat, Magrath, Islay and St. Albert. The various societies provided their own judges at all these shows. In the near future it is probable that the number of horticultural societies in Alberta will be materially increased and the useful work encouraged and assisted by them will be greatly extended.

SHORT COURSE SCHOOLS.

It being impossible on account of the war's imperative demands to get the railway companies to co-operate with us in the usual way by furnishing the necessary equipment for taking live stock to different parts of the Province, it was decided to hold instead a series of lectures on Agronomy—giving special prominence to the necessity of increased food production. The places visited were: Raymond, Macleod, Carmangay, Munson, Trochu, Delburne, Castor, Bowden, Sedgewick and Lloydminster. Viking was also on the list, but owing to a severe snow storm and impassable roads this meeting had to be abandoned. The Sedgewick School lasted three days and two evenings—all the others two days with one evening meeting. The evening meetings were generally given over to an address on "Increased Production in War-time," and illustrated lectures on live stock and on weed identification. At the day meetings the following subjects were very fully discussed: Selection of seed; suitable varieties of wheat, oats and barley; alfalfa; the silo and silage crops; grasses and fodder crops; weed control and soil cultivation.

The meetings, as a rule, were well attended and the keenest interest was manifested on nearly all the subjects treated. Those taking part in the lectures and discussions included: Dean Howes, Prof. Cutler, W. J. Elliott, W. J. Stephen, F. S. Grisdale, G. H. Hutton, W. H. Fairfield, A. S. Blackwood, James McCaig, J. C. Hooper, Hugh McIntosh, J. D. Smith, Nelson Smith, George Hutton, Sr., James Clements and Alex. Galbraith.

INSTITUTES.

Owing to the very serious and universal outbreak of the influenza epidemic all over the country, many of the agricultural societies, that had as usual delayed holding regular institute meetings till October and November found it impossible to hold them by reason of the ban placed on all meetings by the Provincial or Local Boards of Health. An extension of time was arranged for by the Minister in the hope that the epidemic would have abated but unfortunately it continued quite generally into January, 1919. The date for sending in the annual returns was also extended from December 23rd to February 15th.

NEW SOCIETIES.

New agricultural societies have been formed and charters have been granted during 1918 at Veteran, Bye-Moor and Mosside, but as three others have been cancelled for lack of interest shown, viz., at Grassy Lake, Warner and Three Hills, the total number of societies remains the same as last year, viz., one hundred and ten.

Respectfully submitted,

ALEX. GALBRAITH,

Superintendent of Fairs and Institutes.

The following are the names and addresses of the judges who officiated at the fairs and exhibitions held during the past season:

<i>Name and Address</i>	<i>Classes Judged</i>	<i>List of Fairs</i>
A. R. Galbraith, Edmonton	Horses	Crossfield, Lethbridge, Hanna, Colinton, Red Deer, Coronation, Delia, Innisfree, Medicine Hat, Athabasca, Bashaw, Lloydminster, Oyen, Stettler, Lacombe, Munson, Youngstown, Lousana, Vermilion, Donalda, Chinook, Castor, Edson, Trochu, Big Valley.
Wm. R. Lowes, Edmonton	Horses	Crossfield, Sedgewick, Veteran, Wetaskiwin, Red Deer, Edmonton, Provost, Daysland, Medicine Hat, Lacombe, Strome-Killam, Lamont, Irma, Camrose, Lethbridge.
John Wilson, Innisfail	Cattle, etc.	Edmonton, Lacombe, Vermilion, Trochu, Lloydminster, Red Deer, Medicine Hat.
James Boden, Lacombe	Cattle	Red Deer, Medicine Hat, Ledue, Lloydminster, Didsbury, Camrose, Vermilion.
A. A. Dowell, Strathcona	Horses, Cattle, etc.	Edmonton, Lloydminster, Ledue, Fort Saskatchewan, Vermilion, Stony Plain, Camrose, Ponoka, Innisfree, Alix.
George Hutton, Sr., Lacombe	Cattle, etc.	Dunstable, Glenreagh, Millet, Westlock, Busby.
Tom Rawlinson, Innisfail	Horses	High River, Macleod, Pandora, Stavely, Oids.
T. J. Scott, Edmonton	Horses, etc.	Morinville, Rocky Mountain House, Wetaskiwin, Chauvin, Colinton, Athabasca, Dunstable, Consort, Edson, Lamont, Millet.
W. J. Stephen, Claresholm	Horses	High River, Cochrane, Vulcan, Taber.

<i>Name and Address</i>	<i>Classes Judged</i>	<i>List of Fairs</i>
A. B. McGorman, Innisfail	Cattle, etc.	Lacombe, Claresholm, Vulcan, Taber, Chinook, Lake Saskatoon, Waterhole, Grande Prairie, Peace River, Oyen, Griffin Creek, Spirit River, Hanna, Stettler, Milnerton, Munson, Delia, Trochu.
James McCaig, Edmonton	Sheep	Fort Saskatchewan, Lloydminster, Ver- million, Wetaskiwin, Lethbridge, La- combe, Camrose, Calgary.
T. Laycock, Calgary	Cattle	High River.
A. J. Murphy, Cochrane	Horses	Winnifred, Innisfail, Empress, Irvine, Bowden, Priddis, Lomond.
Thos. Cronie, Calgary	Horses	Claresholm, Retlaw.
James Liddell, Lougheed	Horses	Peace River, Lake Saskatoon, Grande Prairie, Griffin Creek, Waterhole, Spirit River.
J. Chas. Yule, Carstairs	Cattle	Lethbridge.
A. E. Meyer, Edmonton	Cattle	Crossfield.
Jas. Clements, Edmonton	Horses and Cattle ..	Fort Saskatchewan, Wetaskiwin, Busby, Rocky Mountain House, Glenreagh, Westlock, Milnerton, Chauvin, Trochu, Consort.
Wm. Sharpe, Lacombe	Cattle	Stavely, Coronation, Castor, Olds, Big Valley, Macleod, Donalds, Camrose, Viking, Foheld.
F. S. Wetherall, Calgary	Cattle	Sedgewick, Strome-Killam, Provost, Morinville, Stony Plain, Innisfail, Veteran, Daysland, Bowden, Priddis, Cochrane, Lousana, Irma.
W. J. Elliott, Calgary	Swine	Edmonton.
J. W. Durno, Calgary	Horses	Cochrane.
Alex. Rankin, Edmonton	Horses and Cattle ..	Alix, Ponoka, Bashaw.
J. A. Gaudin, Stettler	Horses and Cattle ..	St. Paul, Elk Point, Bonnyville.
A. G. Eadie, Edmonton	Horses	Trochu, Viking, Foheld, Milnerton.
R. D. Sinclair, Innisfail	Horses and Cattle ..	Birdsby, Milnerton.
Prof. J. L. Edmonds, Urbana, Ill.	Percheron Horses ..	Lethbridge.

<i>Name and Address</i>	<i>Classes Judged</i>	<i>List of Fairs</i>
Jas. Torrance, Markham, Ont.	Clydesdale Horses..	Edmonton.
Isaac Beattie, Brandon, Man.	Percheron Horses..	Edmonton.
John Gardhouse, Weston, Ont.	Shorthorn and Angus Cattle	Edmonton.
Prof. R. J. Kinzer, Kansas City, Mo.	Hereford Cattle. . .	Edmonton.
Robert Miller, Stouffville, Ont.	Sheep	Edmonton.
J. M. Gardhouse, Weston, Ont.	Clydesdale Horses..	Edmonton.
Frank Brown, Carleton, Oregon.	Hereford and Angus Cattle	Calgary.
Lawrence Ogden Maryville, Mo.	Shorthorn Cattle..	Calgary.
A. L. Robinson, Pekin, Ill.	Percheron Horses..	Calgary.
Wm. Graham, Claremont, Ont.	Clydesdale Horses..	Calgary.
Dr. S. F. Tolmie, Vancouver, B. C.	Horses	Calgary.
R. J. Bevan, Cochrane	Saddle Horses	Calgary, Medicine Hat.
Prof. H. H. Dean, Guelph, Ont.	Dairy Cattle	Calgary.
G. H. Hutton, Calgary	Dairy Cattle, Swine.	Edmonton, Calgary.
E. B. Clancy, Guelph, Ont.	Light Horses	Edmonton, Calgary.
W. I. Elder, Brandon, Man.	Clydesdales	Calgary.
E. S. DeLaney, Fessenden, N. D.	Percherons and Belgians	Calgary.

The following are the names and addresses of the judges who officiated at the poultry and pet stock shows during the past season:

<i>Name and Address</i>	<i>List of Shows</i>
Richard Oke, London Ont	Calgary.
H. Ross, Lethbr.	Calgary, Medicine Hat.
I. Shackleton, Strathcona	Calgary, Edmonton, Wetaskiwin.
Jos. Haden, Calgary	Calgary, Wetaskiwin, Ogden.
M. R. Wallace, Calgary	Calgary, Edmonton, Medicine Hat, Ogden.
J. H. Westbrook, Lethbridge	Edmonton, Lethbridge, Medicine Hat.
George Wood, Winnipeg, Man.	Lethbridge.
E. N. Barker, Cardston	Lethbridge.

LIST OF ALBERTA AGRICULTURAL SOCIETIES AND SECRETARIES FOR 1918
WITH DATES OF FAIRS.

Issued by Direction of the Minister of Agriculture.

<i>Society.</i>	<i>Date of Fair.</i>	<i>Secretary.</i>	<i>Address.</i>
Alix	September 20	W. L. Pettet	Alix
Bashaw	September 24	A. J. Frank	Bashaw
Benalto	July 23	P. T. McKee	Benalto
Berry Creek (Pan- dora)	September 6	L. E. Hehner	Nateby
Big Valley	August 24	F. C. Stokes	Big Valley
Boucher (Bonny- ville)	September 10	J. O. Binette	Durlingville
Bowden	September 21	K. B. Bernard	Bowden
Busby	September 17	W. A. Elliott	Busby
Castor	August 19-20	O. W. Colley	Castor
Chauvin	August 15	P. H. Perry	Chauvin
Chinook	August 9	Miss M. E. Rogers	Chinook
Clareholm	July 30-31	J. R. Watt	Clareholm
Cochrane	September 17-18	Robert Megarthy	Cochrane
Consort	September 25-26	Mrs. C. E. Holmes	Consort
Coronation	August 21-22	T. N. Cuthbert	Coronation
Crossfield	June 20-21	Miss G. L. Halliday	Crossfield
Daysland	August 6-7	A. A. P. McDowell	Daysland
Didsbury	September 26-27	J. V. Berscht	Didsbury
Donalda	August 26-27	Geo. Lowry	Donalda
Edson	September 4	J. H. L. Morgan	Edson
Elk Point	September 6	Chas. Hood	Elk Point
Empress	July 30	G. S. Tucker	Empress
Fort Saskatchewan	September 4-5	G. T. Montgomery	Fort Saskatchewan
Grande Prairie	September 18-19	P. M. Bezonson	Grande Prairie
Griffin Creek	September 9-10	C. H. Gibbs	Griffin Creek
Hanna	August 14	C. R. Krater	Hanna
Hays	September 24-25	Wm. E. Little	Lonsana
Highland	August 13	J. P. McBeath	Delia
High River	July 18-19	A. V. Miller	High River
Innisfail	September 18-19	W. G. McArthur	Innisfail
Innisfree	September 5-6	J. M. Trace	Innisfree
Irma	August 14	F. W. Watkinson	Irma
Irvine	August 9-10	Malcolm McIntosh	Irvine
Lacombe	July 25-26	A. J. Cameron	Lacombe
Lake Saskatoon and Beaver Lodge	September 20-21	H. C. Cooper	Lake Saskatoon
Lamont	August 20	G. R. Stewart	Lamont
Leduc	September 17-18	A. R. Ennis	Leduc
Lloydminster	September 13-14	H. Huxley	Lloydminster
Lomond	August 6-7	H. E. Elvies	Lomond
Macleod	August 7-8	B. J. E. Gardiner	Macleod
Medicine Hat	July 18-20	W. M. McClafferty	Medicine Hat
Mid-Pembina (Dun- stable)	September 13	A. D. Gilmer	K. E. Box, R. R. No. 1, Ex Busby
Milnerton	October 1	J. McKenzie	Knee Hill Valley
Munson	August 15	L. C. Jackson	Munson
North Alberta	September 17	N. O. Jack	Colinton
Olds	September 24-25	J. W. Johnson	Olds
Oven	August 5-6	C. S. Wright	Oven
Paddle River	September 19	Mrs. H. D. Burch	Glenreagh
Peace River	September 6-7	D. J. Johnston	Peace River
Ponoka	September 18-19	G. P. Clarke	Ponoka
Priddis and Millar- ville	October 1	H. D. Wheeler	Priddis

<i>Society.</i>	<i>Date of Fair.</i>	<i>Secretary.</i>	<i>Address.</i>
Provost	August 9	S. F. Burgess	Provost
Red Deer	July 29-31	G. H. Lindsay	Red Deer
Retlaw	August 2-3	W. A. Hempel	Retlaw
Rocky Mountain House	September 23-24	G. T. Thomsoa	Rocky Mtn. House
Sedgewick	August 8	V. W. Messenger	Sedgewick
Spirit River	September 17	D. J. Espen	Spirit River
St. Albert and Mor- inville	August 16	J. B. Dalphond	Morinville
Stavely	August 9	J. F. Bea	Stavely
Stettler	August 16-17	G. T. Day	Stettler
Stony Plain	August 15	Wm. Robertsoa	Stony Plain
St. Paul	September 4	Ernest Cloutier	St. Paul
Strome-Killam	August 13	R. J. McGowan	R.R. No. 1, Killam
Taber	July 31-Aug. 1	W. C. Blount	Taber
Tofield	September 18	C. W. Barnes	Tofield
Trochu	October 3-4	R. H. Slipp	Trochu
Vegreville	August 22-23	Caas, Fulton	Vegreville
Vermilion	September 11-12	Job Mace	Vermilion
Veteran	August 9-10	C. P. Garvey	Veteran
Viking and Biren Lake	September 20	Wm. McAthey	Viking
Vulcan	August 3	Rev. A. R. Schrag	Vulcan
Waterhole	September 12-13	H. M. Bailey	Waterhole
Westlock	September 20-21	A. R. Brown	Westlock
Wetaskiwin	August 20-21	R. N. Shaw	Wetaskiwin
Winnifred	August 8-9	G. J. Elliott	Winnifred
Youngstown	August 1-2	C. A. Nelson	Youngstown

EXHIBITION ASSOCIATIONS.

Athabasca	September 19-20	C. H. Pratt	Athabasca
Calgary	June 28-July 5	E. L. Richardson	Calgary
Camrose	August 1-3	J. D. Saunders	Camrose
Edmonton	July 8-13	W. J. Stark	Edmonton
Lethbridge	July 22-27	W. McC. Moore	Lethbridge

For further particulars, address,

ALEX. GALBRAITH,

Supt. of Fairs and Institutes.

Edmonton, Alberta.

REPORT OF SCHOOL FAIRS.

Stn. 1 beg to submit herewith a report of the School Fair work for the year 1918.

This work has made satisfactory growth in both volume and interest during the year. The number of districts, the number of schools, pupils, exhibits and attendance have about doubled. The work during the two years is shown in the figures given below:

	1917	1918
No. of centres	9	15
No. of schools participating	186	264
Cost of seed	\$1,139.52	\$2,199.57
Average cost of seed per centre	126.60	146.65
Average cost of seed per school	7.20	8.33
Estimated cost of seed per school	\$8.00	

Out of fifteen districts there were fairs held at all except two places. In five of the districts the school fairs were held with the regular fairs, namely, at Vermilion, Grande Prairie, Daysland, Olds and Bowden. In other districts the fairs were held by themselves. The point as to the advantage of holding these fairs separately or with the other fairs is not settled. Where the placing of exhibits and the judging are expeditiously done for the school fair so that the exhibits are open for inspection early on the second day the school fair gets satisfactory patronage and recognition when held with the district fair, but if the work is delayed and the exhibits are not open early they do not get very much attention. It is perhaps more a question of management than it is a question of joint or separate exhibitions.

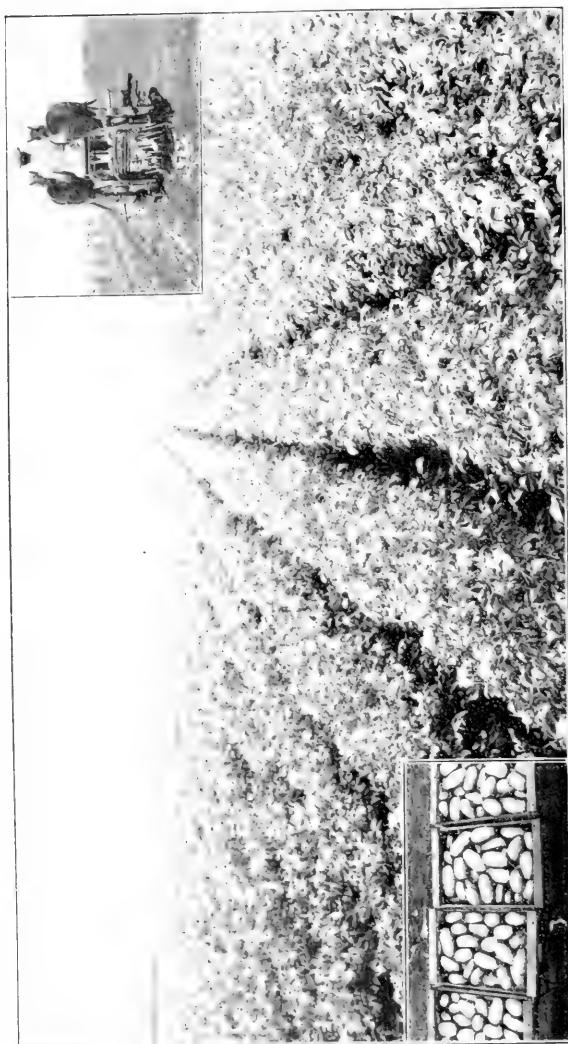
There appears to be a steady growth in the live stock features of these fairs. This year there were 339 head of live stock on exhibition at the various fairs. Vermilion led with 97 head, Claresholm and Sedgewick following with 48 and 43 respectively. The animals are being better brought out and are of better breed quality than they have been in previous years. In some cases the animal belonging to the child was not by any means the choice of the farm, but the educational value of having the boy own and take care of good stock is being recognized by the parents to a greater extent each year and many of the animals, particularly in the case of pigs, were pure-bred.

At nearly all of the fairs, particularly where they were held in good towns, the local support of the prize list and the patronage of the fair were active and highly beneficial to the success of the event. It will be necessary in the future to try and increase the local responsibility with regard to financing these fairs.

Yours respectfully,

H. W. SCOTT,

Agricultural Representative.



ALBERTA FOOD RESOURCES

REPORT OF WOMEN'S INSTITUTES.

SIR,—I have the honour to submit herewith the Women's Institute Annual Report for the year 1918.

During the year 1918 the Women's Institute of Alberta has been successful in perfecting the organization of the society. To better facilitate the work of the Institutes the Province was divided into four geographical districts to be known as District No. 1, District No. 2, District No. 3, and District No. 4. All Institutes were grouped in districts as follows:

DISTRICT NO. 1.

Constituencies.

Grouard
Athabasca

Clearwater
Peace River

DISTRICT NO. 2.

Constituencies.

Pembina
Sturgeon
Beaver River
St. Paul
St. Albert

Victoria
Vegreville
Vermilion
Edson
Stony Plain

Lac Ste. Anne
Whitford
Edmonton
Alexandra

DISTRICT NO. 3.

Constituencies.

Acadia
Cochrane
Innisfail
Olds
Red Deer
Wainwright

Camrose
Didsbury
Lacombe
Ponoka
Sedgewick
Coronation

Hand Hills
Leduc
Ribstone
Stettler
Wetaskiwin

DISTRICT NO. 4.

Constituencies.

Bow Valley
Gleichen
Medicine Hat
Redcliff

Clareholm
High River
Calgary
Warner

Cardston
Little Bow
Pincher Creek
Taber

Each constituency elected a Constituency Executive Board composed of the following officers: Constituency Convener elected at annual convention, a Secretary-Treasurer elected at constituency conference, and a Constituency Committee composed of one representative from each Institute in the said constituency.

The Constituency Boards have accomplished splendid work in this first year of their existence. A number of the constituencies have held conferences, which have been well attended. A fine enthusiasm and

healthy competition between neighboring Institutes have resulted from this constituency organization.

The Fourth Annual Convention of the Alberta Women's Institutes was held in Edmonton, March 6th, 7th and 8th. The Convention proved a success in every respect. The delegates numbered 600. The following officers were elected for 1918-1919:

President—Miss Isabel Noble, Daysland.
 Vice-President—Mrs. A. H. Fleming, Alliance.
 Secretary-Treasurer—Mrs. A. H. Rogers, Fort Saskatchewan.
 Director, District No. 1—Mrs. J. Boyd, Vanreana.
 Director, District No. 2—Mrs. F. Grisdale, Vermilion.
 Director, District No. 3—Mrs. A. A. Towns, Coronation.
 Director, District No. 4—Mrs. B. D. Hummon, Carmangay.

A conference of the Provincial Advisory Board and Constituency Conveners was held in Calgary, May 22nd and 23rd, and in Edmonton May 28th. It was unanimously passed that the District Conference should be continued, the Southern Conference to be held at Taber, Central at Wetaskiwin, and the Northern at Edmonton. Owing to the influenza epidemic these had to be cancelled.

The following district secretary-treasurers were appointed:

Northern District No. 1—Mrs. W. H. Bromley, Spirit River.
 Northern District No. 2—Mrs. J. K. Taylor, Mahaska.
 Central District—Mrs. Greensides, Loughheed.
 Southern District—Miss Ida Honeysett, Coaldale.

Conveners of special committees were appointed as follows:

Supervisor of Girls' Clubs—Mrs. Montgomery, Wetaskiwin.
 Supervisor of War Work—Mrs. A. A. Towns, Coronation.
 Supervisor of Baby Welfare—Mrs. F. W. Hughes, Cavendish.

The following women were elected as the Women's Institute representatives on the standing committees of the National Council of Women of Canada:

Agriculture for Women—Mrs. Rainforth, Lacombe.
 Fine and Applied Arts—Mrs. Wm. Taylor, Stettler.
 Professions and Employments for Women—Mrs. F. W. Galbraith, Red Deer.
 Press—Mrs. J. F. Price, Calgary.
 Education—Mrs. Morell, Gem.
 Public Health—Mrs. D. R. Melvor, Cowley.
 Care of Mentally Deficient—Miss E. L. Starer, Onoway.
 Citizenship—Mrs. J. Goodall, Ryley.
 Laws—Mrs. Jas. Malloch, Stony Plain.
 Nursing—Mrs. Grimshaw, Peace River.
 Supervised Playgrounds—Mrs. B. M. Dressler, Mahaska.
 Household Economics—Mrs. A. E. Wood, Stony Plain.

During the Conference the Provincial Advisory Board decided to give two prizes, namely, \$50.00 to the constituency having the greatest number of new members between June 15th and the convention in March; and \$50.00 for the constituency having the greatest number of new Institutes during the same period.

There have been twenty-three new Institutes organized during 1918. The two hundred and twelve Institutes of 1917 have been increased to two

hundred and thirty-five. The increase would have been much greater but on account of the Spanish Influenza epidemic a number of organization meetings had to be postponed. During the year the total membership of the Institutes increased from 8,000 to 9,250.

In February, 1918, a circular was sent to each Institute with the purpose of ascertaining whether the visit of a speaker or a Demonstrator in Foods and War Cookery, Sewing or Home Nursing, was desired. As a result under the direction of professional instructors the following number of Short Courses were given.

- 79 Short Courses in Foods and Cookery, including 309 Demonstration-Lectures.
- 34 Short Courses in Sewing, including 117 lessons.
- 26 Short Courses in Home Nursing, including 77 Demonstration-Lectures.
- Total 139 Short Courses, including 503 Demonstration-Lectures.
- Total attendance at Short Courses, 16,187.
- 62 Institutes were also visited and addressed by Institute speakers.

The demands of the Institutes for material to aid in preparing programmes have occasioned the enlargement of the loan collection of bulletins and reference books. The number of books in the travelling libraries have also been greatly increased.

WORK ACCOMPLISHED BY INSTITUTES.

At the present time there are twenty-seven Women's Institute Rest-rooms in Alberta. In many towns and villages the rest-room is an ideal community home and supplies the need of the locality. The rest-room was often the work-room of the Red Cross, or the recreation headquarters of the community, or the home for the sick, and in a number of places is used as a co-operative market.

The Institutes have taken their share of the work in caring for those afflicted by Spanish Influenza. In many towns the local Institute installed soup and diet kitchens to supply food for the sick. In a number of places the Institutes were of considerable assistance in establishing hospitals.

The majority of the Institutes have been most active in patriotic work. Large sums of money have been raised for Red Cross, Belgian Relief, and St. John Working Committee. Exact figures cannot be obtained, as all the reports of war work have not been received on account of annual meetings of the Institutes having been postponed owing to the Spanish Influenza epidemic.

The Women's Institute and W.C.T.U. were instrumental in raising \$3,200.00 for Child Welfare work by a tag day held September 21st, 1918. Children's Health problems have been studied by the Institutes throughout the Province in accordance with the Women's Institute 1918 slogan "Save the Babies."

WOMEN'S INSTITUTE GIRLS' CLUBS.

During the year fourteen Women's Institute Girls' Clubs have been organized.

The objects of these clubs are the improvement of social and educational conditions among girls of school and adolescent age in rural and other communities, by means of—

1. Holding meetings to promote social and civic activities.
2. Establishing organized recreation for the girls of the communities.
3. Encouraging the study of English Literature, Drama, Music, Art, etc.
4. The study of Home Economics (Foods and Cookery, Household Sanitation, Sewing, Textiles, Home Nursing, First Aid, etc.)
5. The study of any subject which the members of the club desire.
6. The encouragement of agriculture by means of garden competitions, etc.

Respectfully submitted,

MARY MACISAAC,

Superintendent.

REPORT OF THE SEED AND WEED BRANCH

SIR.—I beg to submit the report of the Seed and Weed Branch of the Department for the year 1918.

The work of this branch during the year 1918 included such work as supervising the holding of Field Crop Competitions, Good Farms Competition, Local Seed Fairs, Provincial Seed Fair, the distribution of seed grain under the 1918 Seed Grain Act, the making of collections due from the distribution of seed grain undertaken by The Seed Grain Act of 1917, the making of collections due from the distribution of seed grain in the years 1908-9, the supervising of weed inspection work, together with such educational work as was thought most practical and helpful.

FIELD CROP COMPETITIONS.

Owing to the poor prospect for crops, practically over the entire Province, only a very few Agricultural Societies made any effort to have a competition in their respective districts. Many who did were obliged to cancel their undertakings later, the results being that while some ten or twelve societies tried to hold competitions, only one succeeded in carrying one through, namely, North Alberta Agricultural Society at Colinton. This Society held on Aug. 24th, a very satisfactory Crop Competition which was judged by Arthur Perry of the staff of the Department at Edmonton.

LOCAL SEED FAIRS.

The number of Local Seed Fairs held during 1918 was 33, an increase of two over the number held in 1917. This seems satisfactory considering that there were a few districts in 1917 which did not have a very successful grain year. The average number of exhibits at these fairs showed slightly better than those of previous years. Some fairs had eight or ten exhibits; others had as many as fifty exhibits. The quality of the exhibits of 1918 was in most cases very encouraging, as few exhibits showed indications of smut or other diseases, while small noxious weed seeds and wild oats were rarely found.

The question why some seed fairs are successful while others are failures has been a matter of much discussion. The Department has looked into the matter and has generally found that there were any number of farmers in these districts where poor fairs were held that had the very best of seed grain and would have exhibited their products if the officers of the Agricultural Societies had made any effort to encourage them. It is strongly recommended here that the directors of such societies give more time to this part of their work; also that they give at least two months' notice previous to date of holding the fair, so that every farmer in the community will have ample time to know that such a fair will be held, to get familiar with the objects of it and to prepare his exhibit.



THE GREAT ALBERTA CACTUS CROP

The following is the list of Seed Fairs held in the fall of 1917 and winter of 1918, with dates and names of judges:

<i>Society</i>	<i>Date</i>	<i>Judges</i>
Bowden	Feb. 16, 1918	E. R. Rasmuson
North Alberta (Colington)	Dec. 21, 1917	J. D. Foster
Consort	Feb. 15, 1918	J. D. Foster
Chauvin	Mar. 2, 1918	J. M. Clark
Cochrane	Mar. 16, 1918	N. S. Smith
Camrose	Jan. 17, 1918	J. M. Clark
Daysland	Jan. 15, 1918	J. D. Foster
Hays (Lousana)	Jan. 7, 1918	E. R. Rasmuson
Irma	Dec. 21, 1917	J. M. Clark
Innisfree	Jan. 3, 1918	J. M. Clark
Innisfail	Jan. 12, 1918	Geo. Hutton
Beaver Lodge (Lake Saskatchewan)	Mar. 20, 1918	(Own Judge)
Central Alberta (Lacombe)	Feb. 8, 1918	J. D. Foster
Longdon (Bow River)	Feb. 5, 1918	A. S. Blackwood
Lloydminster	Jan. 28, 1918	F. S. Grisdale
Manyberries	Nov. 17, 1917	H. MacIntosh
Deseret (Magrath)	Jan. 24, 1918	H. MacIntosh
Munson	Jan. 12, 1918	E. R. Rasmuson
Okotoks	Jan. 26, 1918	H. MacIntosh
Oyen	Feb. 20, 1918	W. S. Jacobs
Eastern Alberta (Provost)	Feb. 17, 1918	E. R. Rasmuson
Retlaw	Feb. 8, 1918	E. A. Beck
Stettler	Feb. 28, 1918	J. D. Foster
Sedgewick	Jan. 18, 1918	J. D. Foster
Sibbald	Jan. 10, 1918	E. R. Rasmuson
Strome-Killam	Jan. 16, 1918	J. D. Foster
Stony Plain	Jan. 26, 1918	Prof. Cutler
Taber	Jan. 22, 1918	H. MacIntosh
Tofield	Dec. 22, 1917	J. M. Clark
Vermilion	Feb. 27, 1918	J. M. Clark
Viking and Birch Lake	Jan. 4, 1918	J. M. Clark
Vegreville	Jan. 4, 1918	J. M. Clark
Wetaskiwin	Jan. 23, 1918	J. M. Clark

PROVINCIAL SEED FAIR.

The Provincial Seed Fair was held in Edmonton on Feb. 18th to 21st, in conjunction with the annual convention of the Alberta Fairs Association and the Alberta Dairy Convention. The total number of exhibits compared favorably with the number in previous years. Oats, wheat, and barley exhibits both in numbers and quality were exceptionally good, while such as peas, flax, timothy and small seeds were much below the average. The potato exhibits were also very disappointing, particularly as the business men of Edmonton contributed about \$800.00 worth of special prizes and in addition to this the sum of \$500.00 in cash prizes was offered by the Department and there were only some eight or ten exhibits. The cause of this poor showing in potatoes is difficult to explain, except from the fact that the weather was extremely cold, which made it impossible for farmers to bring in their potatoes without having them frozen.

With the rapid development of agriculture over the entire Province, it has become almost impossible to hold one Provincial Seed Fair that will meet with the wishes of all farmers interested, because to hold such

a competition in either Edmonton or Calgary where shipping facilities require that it be held, the distance is too great to the extreme corners of the Province. In past years when this fair is held in Calgary, the northern farmers have not sent exhibits, and when it is held in Edmonton the extreme southern farmers refuse to send theirs. To offset this difficulty it is recommended that the Department of Agriculture provide a substantial grant to be paid to both the Edmonton and Calgary Exhibition Associations, so that they could carry on two Provincial Seed Fairs in conjunction with their winter shows, with the division of districts at some point between Edmonton and Calgary, the carrying out of the fairs being still subject to the direction and regulations of the Department of Agriculture.

THE INTERCHANGE AND GERMINATION OF SEED GRAIN.

From the reports of the seed fairs and other information gathered by this Branch, it has been in a position to advertise where and for what price parties wishing to purchase seed could secure it. There have been no accurate records of this work kept, yet a fair estimation would be that about 100,000 bushels were bought and sold through the Department's efforts. In most cases the farmer who wanted seed and the farmer who had seed to sell were brought together. In this way the best price for both parties was obtained on account of there being no middleman's profits. Some car lots were also looked after, being shipped direct from farmers to merchants in Eastern Canada. The New Brunswick Government placed an order with the Department for sixteen cars of Red Fyfe Wheat, but as the order was late in the season only two cars of satisfactory seed of this variety could be secured. The farmer who filled this order was well paid for his trouble. A great quantity of potatoes were also marketed through this branch, which had the effect of increasing considerably the price to the actual grower. For instance, through one order received from a Montreal firm for eight cars the Department was able to raise the price 10c per bushel in one day. In 1918 Alberta potatoes were shipped from as far north as Swan River to Toronto and points east, and in most cases landed at their destination in good order, and also brought No. 1 price on account of their good cooking qualities.

Germination tests of seed grain were looked after by this branch, and while this work was not very extensive, it was sufficient to show that such tests are most important from the farmer's point of view, as correspondence attached to many samples sent in, indicated that while the farmer was of the opinion that his grain was free from frost results, the test often showed it to be very poor seed. Very few people are able to state that grain is suited for seed without making a germination test, and in this view it is recommended that every farmer take advantage of the following free germination stations: Department of Agriculture, Edmonton; The University of Alberta, Edmonton; the three Schools of Agriculture, at Claresholm, Olds and Vermilion; and the Dominion Seed Branch, Calgary.

DISTRIBUTION OF SEED GRAIN, 1918.

Owing to certain districts in 1917, some through drought and some through frosts, not having very successful crops, many farmers were

obliged to make application to the Government for assistance in securing seed grain. This, together with the impulse to greater production caused by the war, justified the Legislature in passing an Act known as the Seed Grain Act of 1918.

This Act authorized the distribution of seed grain to those farmers in need of such assistance, whose land was not situated within the boundaries of a Rural Municipality. The greater portion of this distribution took place in such districts as Milk River, Masinasin, Manyberries, Seven Persons, Medicine Hat, Brooks, Bassano, Empress, Kirriemuir, St. Paul, Lac La Biche, Athabasca and Falher, but generally the great portion of this work was in such districts as were affected by drought.

The total value of this distribution for 1918 amounted to \$63,163.07 and the total number of bushels of all grains distributed was 43,417, while the number of bushels of each grain were: wheat 15,295, oats 27,494, barley 658. A large percentage of this grain was found in districts where it was needed, which simplified the work considerably, besides proving a very satisfactory medium for the disposition of such seed. Further, farmers in this way were able to purchase their seed much cheaper and have it cleaner than if they were obliged to buy through other channels.

COLLECTIONS ON SEED GRAIN DISTRIBUTIONS.

On account of the large amount of money still due the Government on seed grain issued to farmers in this Province during the years 1908-9, together with the prospects of an excellent crop in the northern sections of the Province it was considered that this year would be an opportune time for the farmers to clean up their old seed grain indebtedness. With this in view a collector was sent out during the month of July with instructions to locate as many as possible of these people owing, and to either collect in cash or take short term notes. The work was progressing very satisfactorily and considerable cash had been collected up till July 23rd, which was the date of the severe frost that destroyed large areas of crops. After this date farmers did not care to pay cash but were willing to give their notes.

Notwithstanding these adverse conditions and that the collector sent out spent only part of his time on such work the returns proved very satisfactory. From July 1st to December 31st, some \$2,206.14 was collected in cash while \$1,678.83 was collected in short term notes.

The collections in 1918 on the distribution of seed grain during 1917 showed very satisfactory returns. Out of \$39,713.53 due in 1918, there was \$28,652.22 collected in cash, \$9,132.16 collected in renewed notes, \$1,619.65 still pending, but which is expected will either be paid in cash or renewed in notes. The sum of \$110.00 was collected by court but is not yet turned in, and \$169.50 which was placed in court for collection is considered doubtful. These amounts make the total amount expended on seed grain distributed to farmers during 1917, but which did not fall due till January 1st, 1918.

The amount of seed grain distribution of 1918 was as before mentioned \$63,163.07, which, of course, does not fall due till January 1st,

1919. Out of this amount, however, something like \$5,000.00 was paid during 1918, mostly by Loan Companies who were negotiating loans on lands that had seed grain indebtedness.

NOXIOUS WEED INSPECTION.

Inspection of noxious weeds was carried out as in previous years. In some instances it was necessary to change local districts, due to new Rural Municipalities having been organized. In other parts it was found necessary to reduce the size of districts owing to their becoming more thickly settled and having more land under cultivation which, of course, made a larger area to be inspected.

No inspectors were engaged in the central or northern portions of the Province, as practically all this area is now organized into Rural Municipalities. Complaints from any units in the center or north that have not yet been organized were looked after directly from the Department.

With the greater portion of the weed inspection work in the southern portion of the Province, and with only a few units organized into Rural Municipalities it was found necessary to make 27 inspection districts. These were made of such size as to make it possible for each inspector to perform his duties satisfactorily. The Inspectors were engaged at such dates as they were required taking into consideration the soil and climate conditions, and the nature of the weeds in each district. In districts where early maturing winter annuals are known to be serious, early appointments are made, while in other districts where late maturing annuals and perennials are common, appointments are made at a later date. These methods for the appointing of inspectors have proved satisfactory both to the farmers and the weed inspectors.

The following is a list of the Weed Inspectors employed during 1918, with the addresses:

A. R. Archibald	Cardston
H. A. Beard	Taber
W. W. Charlton	Millicent
E. J. Colloway	Cochrane
John Clark	Gleichen
John Chambers	Avalon
L. T. Grady	Warner
Archie Gillies	Bowell
John Hollowell	Thelma
Edward Hopewell	Cardston
Robt. Hogarth	Cochrane
George Howson	Medicine Hat
L. A. Haines	Twin
Frank Johnston	Bassano
Edward Lynn	Albion Ridge
J. F. McDougall	Granum
Dan McDougall	Winnifred
Alex. McLean	Staunton
George Murray	Whitla
N. B. Nalder	Raymond
Adolph Plante	Gleichen
D. S. Ries	Masinasin
Edward Sobey	Alderson
J. W. Snell	Oyen

Lyman Taylor	Magrath
Peter Jaffrey	Olds
John Niddrie	Edmonton
Arthur Perry	Edmonton

The Inspectors were found to be a very efficient and energetic body. They are and have proven to be all interested in the control of noxious weeds. Many of these men are experienced at this work. Their years of experience have taught them many things which is of value to both the public and to this Department. With this in view, it cannot be too strongly recommended that when a man has proved to be an efficient inspector he should be engaged in the capacity of weed inspector from year to year.

TRoublesome Weeds.

The condition of the Province with respect to weeds today is much different from what it was nine or ten years ago. In the early days such weeds as Stink Weed, Tumbling Mustard, Russian Thistle, Ball Mustard and Wild Oats, which are classified as either annuals or winter annuals, were the only weeds that appeared to trouble the farmers in their agricultural duties. Today these weeds are of a secondary consideration, while such weeds as Canada Thistle, Perennial Sow Thistle, Couch Grass and Poverty Weed have come to the front. True they did not come so quickly as the first weeds but neither will they disappear as quickly, because they are vicious perennial plants that propagate both by seed and underground running rootstocks. If these weeds propagate both above and under the ground, then they must be dealt with in the same manner. The Department has been taking account of these new weeds for some years and has constantly been advising the farmers as to their control but the Department can make little progress alone, and unless the farmer is willing to meet these difficulties energetically and systematically himself the outlook is not very encouraging.

EDUCATIONAL WORK.

This work was carried on by the distribution of weed bulletins and pamphlets and by posting colored posters of such weeds as Canada Thistle and Perennial Sow Thistle throughout the Province. Addresses were given at most of the seed fairs, short courses, and institute meetings. In some places it was possible to give an illustrated lecture showing the plants in natural colors. The speakers generally discussed identification, habits of reproduction together with the best principles of eradication and control.

Respectfully submitted,

J. D. SMITH,

Supt. Seed and Weed Branch.

REPORT OF THE POULTRY SUPERINTENDENT

SIR,—I beg to submit herewith the report of the Poultry Branch for the year 1918.

GENERAL SURVEY.

The poultry industry of the Province has suffered considerably during the past year directly and indirectly owing to the war. Many of our young men called to military service assumed the care of the poultry which in their absence was more or less neglected.

Poultry raising during the year was also seriously handicapped owing to the scarcity of suitable feeds and advanced prices which made the supply almost prohibitive. These conditions were seriously added to by an order from the Food Board prohibiting the feeding to poultry all wheat of suitable quality for milling purposes. Regular poultry foods were not only high priced but difficult to secure, with the result that a further curtailment of poultry raising resulted.

To these general conditions were added the crop failure of the southern portion of the province and the unusual frost in July in Central and Northern Alberta. These conditions, added to the already difficult problems facing poultry raisers, compelled many to further reduce the size of their flocks, and in some cases to go entirely out of the business. A redeeming feature of the future work is the fact that in the curtailment and reduction that has taken place during the past two or three years, poultrymen generally have disposed of the inferior and non-producing birds in their flocks. When conditions become normal the poultry industry of the province will recover quickly, with a much better class of stock for breeding and commercial purposes than under pre-war conditions.

GREATER POULTRY PRODUCTION CAMPAIGN.

As soon as it became known that a special campaign for greater production during 1918 was to be undertaken, immediate action was taken to have poultry raisers share in the effort. A circular letter was sent to Poultry Associations and prominent poultry raisers in all parts of the Province, asking their assistance and co-operation. A prompt and ready response was received, and poultry raisers generally did their share in the Greater Production movement, consistent with conditions under which they labored. Assistance was also asked of the breeders in supplying breeding stock and eggs for hatching and arrangements made whereby the breeders supplied hatching eggs and stock to customers of the Provincial Poultry Plant. In connection with this campaign we placed orders through breeders for the following:

White Wyandottes	139 settings
Barred Rocks	117 settings
Buff Orpingtons	54 settings
Island Red	68 settings
Other varieties	10 settings

Thirty-one male birds were also supplied in this way to customers whose orders could not be supplied from the Poultry Plant.

PROVINCIAL POULTRY PLANT.

The work at the Provincial Poultry Plant during the year proved to be the most successful in the history of the plant. For the past two or three years special attention has been given to the building up of exhibition and egg-producing qualities in the various breeds kept. The results in this work have been most satisfactory, and the quality of stock kept is in keeping with the object aimed at. It may be added that pullets commenced laying in September. The demand for male birds was exceptionally good, and every available bird was disposed of. There was also a good demand for females. The demand for eggs for hatching and baby chicks exceeded that of previous years and was far in excess of the supply. During the season the following egg orders were filled:

Barred Rocks	162 settings
White Wyandottes	130 settings
Buff Orpingtons	109 settings
Rhode Island Reds	101 settings
White Leghorns	47 settings
	<hr/>
	549 settings

Baby chicks were also supplied as follows:

Barred Rocks	277 chicks
White Leghorn	460 chicks
Buff Orpington	118 chicks
Rhode Island Reds ..	100 chicks
White Wyandottes ..	75 chicks
	<hr/>
	1030 chicks

Owing to the large demand for hatching eggs the supply of baby chicks was limited. Thirty-four orders were received and money refunded owing to exhaustion of the supply. During the year one hundred and forty-four male birds were sent out for breeding purposes. Receipts for seventy-nine male birds were refunded and thirty-one birds supplied to customers through breeders. While complaints were general with respect to hatching and rearing, both were exceptionally good at the Provincial Poultry Plant. Considerable losses in rearing were reported from many parts of the province due to the high winds and raw weather. Where proper housing accommodation was provided the rearing was usually successful.

EDUCATIONAL WORK.

Instruction in all branches of poultry raising was given last spring at the Agricultural Schools, but owing to the epidemic no courses were given in the fall.

With a view to keeping in touch with customers of the Poultry Branch and assist them in their poultry work by a follow-up system arrangements were made to give a special Correspondence Course in



A PROMINENT MEMBER OF THE JUVENILE POULTRY CLUB.

Poultry. This course was so arranged that each week the course dealt with the work actually in hand. This plan proved a decided success from the fact that the information contained reached the student at a seasonable time.

Over three hundred poultry raisers requested their names to be placed on the mailing list agreeing to follow as far as possible the instruction given. The courses sent out were as follows:

Article No.

- 1.....Selecting the Breeding Stock.
- 2.....Selecting Eggs for Incubation.
- 3.....Management of Setting Hens and Incubators.
- 4.....Testing eggs for Fertility.
- 5.....Preparing for the Chicks.
- 6.....Taking off the Hatch.
- 7.....Feeding and Rearing.
- 8.....Mid-Spring Operations.
- 9.....The Marketing of Eggs. Section 1.
The Marketing of Eggs. Section 2.
- 10.....Review of the Hatching Season.
- 11.....The Best Breed to Keep.
- 12.....Disposal of Undesirable Hens.

The course, however, while covering most of the poultry operations of the season was not completed. The unfortunate crop conditions that developed during the summer seriously affected the poultry work, and required the services of the writer in connection with the Relief Tariff, a report of which is herewith attached.

Respectfully submitted,

A. W. FOLEY,

Poultry Superintendent.

CALGARY, ALBERTA, February 21st, 1919.

MR. H. A. CRAIG,

*Deputy Minister of Agriculture,
Parliament Buildings,
Edmonton, Alberta.*

DEAR SIR.—I am in receipt of your favor dated February 17th, 1919 and am enclosing copies of the Preliminary Reports sent you, and trust that same will be in order.

I remain,

Yours respectfully,

J. H. HARE,

Poultry Marketing Commissioner.

(COPY)

110 Maclean Block,

CALGARY, ALBERTA, January 15th, 1919.

MR. H. A. CRAIG,

*Deputy Minister of Agriculture,
Parliament Buildings,
Edmonton, Alberta.*

DEAR SIR.—Enclosed please find a preliminary report of the business of the Egg and Poultry Marketing Service for the year 1918.

I remain,

Yours respectfully,

(Signed) J. H. HARE,

Poultry Marketing Commissioner.

P.S.—Also list of shippers; map, with shipping points marked, trading account and balance sheet.

PRELIMINARY REPORT OF THE EGG AND POULTRY MARKETING SERVICE, 1918.

Farmers and farmers' organizations at 81 points in the Province made use of the service.

Total number of shippers, 154.

Total business, including eggs and poultry for year, \$74,258.81.

Total eggs received for marketing during 1918, 4,579 cases or 137,370 dozen.

Total poultry received for marketing, 14,863 head, including spring chickens, fowl, geese, ducks and turkeys.

Total eggs put in storage during year: Extras, 22,080 dozen; No. Ones, 18,270 dozen; No. Twos, 470 dozen. Total 40,820 dozen.

Liquid Eggs, 356 pounds.

Total Poultry put in storage during year:

Fowl and Spring Chickens	39,899 pounds
Geese	1,875 pounds
Ducks	451 pounds
Turkeys	3,166 pounds
Total	45,391 pounds

PRELIMINARY REPORT OF THE EGG AND POULTRY MARKETING SERVICE,
1918

1918 SHIPPING POINTS.

Alix	Hanna	Olds
Aene	Halkirk	Okotoks
Blackfalds	High River	Parkland
Blackie	Hill End	Penhold
Bowden	Huxley	Pincher Creek
Botha	riespero	Ponoka
Braut	Innisfail	Quarrel
Calendula	Irma	Richdale
Carstairs	Irricana	Retlaw
Camrose	Jenner	Red Deer
Cayley	Killam	Sundre
Carbon	Kitscoty	Seven Persons
Cheadle	Leo	Sibbald
Carmangay	Langdon	Swalwell
Claresholm	Lousana	Stettler
Clive	Manyberries	Standard
Consort	Mazeppa	Scotfield
Crossfield	Macleod	Sylvan Lake
Didsbury	Mound	Tees
Dalemead	Moyerton	Three Hills
Delia	Munson	Throne
Eckville	Nanton	Tudor
Elmora	Namaka	Trochu
Erskine	Nightingale	Veteran
Gadsby	Orion	Wetaskiwin
Grainger	Orton	Winnifred
Gwynne	Oyen	Zetland

TRADING ACCOUNT—MERCHANDISE EGGS, AS AT NOVEMBER 30TH, 1918.

Merchandise Sales—		Dr.	Cr.
April and May	\$18,192.95		
June	6,905.00		
July	8,775.83		
August	3,078.07		
September	3,432.27		
October	2,683.77		
November	10,305.36		
			\$53,373.25
Merchandise Purchases			
April	\$ 9,859.67		
May	12,310.75		
June	9,280.02		
July	6,556.62		
August	3,311.27		
September	1,531.55		
October	628.98		
November	31.15		
			44,650.01
			89,323.24

GROSS PROFIT.

Stationery	\$	43.00	
Office Expense	\$450.49		
LESS: Unearned Ins.	73.30		
		377.19	
Freight, Express and Cartage		2,316.36	
Egg Fillers	\$1,258.02		
Less on hand	330.00		
		928.02	
Light Egg Cases	\$1,113.73		
Less on hand	36.75		
		1,076.98	
Excelsior		56.11	
Rents		797.49	
Wages		1,379.71	
Depreciation on Heavy Egg Cases		274.67	
Depreciation on Equipment		115.15	
Net profit carried to profit and loss account		1,958.26	
		<u>\$9,323.24</u>	<u>\$9,323.24</u>

BALANCE SHEET, AS AT NOVEMBER 30TH, 1918.

	Dr.	Cr.
Dominion Government Loan Account		\$ 129.54
The Royal Bank, Edmonton, Alberta	\$ 129.54	
The Royal Bank, Calgary (old account)		10.18
Sundry Debtors	9,121.71	
Sundry Creditors		1.69
Unearned Insurance	73.30	
Egg Fillers (Inventory)	330.00	
Heavy Egg Cases	200.00	
Light Egg Cases (Inventory)	36.75	
Equipment	116.00	
Provincial Government of Alberta		19,624.50
Cash Account	100.00	
Royal Bank of Canada, Calgary, Current Account	2,179.49	
Dominion Bank of Canada, Current Account	2,859.39	
Profit and Loss Account		2,096.83
Poultry Freight, Express and Cartage	940.39	
Poultry Crates	412.49	
Poultry Merchandise Account	4,677.76	
Poultry Boxes	228.82	
Poultry Wages	660.25	
Poultry Feed	111.50	
Poultry Rents	136.57	
Poultry Office Expense	126.77	
Accounts Payable		578.19
	<u>\$22,440.93</u>	<u>\$22,440.93</u>

REPORT OF THE POULTRY MARKETING COMMISSIONER

SIR,—I beg to submit the following report on the work of the Poultry Marketing Branch for the year 1918:

The Egg and Poultry Marketing Service concluded its first complete year of business in December, 1918. In this year both eggs and poultry were marketed and a total business of \$74,258.81 was transacted on behalf of the farmers. Individual farmers and organizations of farmers at 81 points in the province made use of the service. In the season of 1917, 13,300 dozens of eggs were marketed. This increased to 137,370 dozen in 1918. During the past season the service extended its activities to include poultry and marketed 14,863 head, including spring chickens, fowl, geese, ducks and turkeys.

A Co-OPERATIVE SCHEME.

The work of the service is very similar in character to that of a co-operative marketing association. The grading station in Calgary performs the services of a central clearing house, receiving its supply from numerous individual farmers, groups of farmers and farmers' associations throughout the country.

At the grading station the eggs are carefully graded by expert candlers and the poultry is killed, dressed, graded and packed.

Both eggs and poultry are graded according to the demands of the best markets and packed in such a manner as to present the most attractive appearance and command the best price.

The transportation, grading and selling expenses are deducted from the gross sale price and the net amount is returned to the farmers, either direct or through their local shipping agents, all remittances being made in accordance with the quality of the goods supplied.

Owing to the time it takes ordinarily to receive and grade shipments, to place the goods on the market and complete transactions, and the desire for prompt returns, it has become a part of the policy of the Marketing Service to advance to shippers, the approximate market price immediately the goods have been graded and at the close of the egg or poultry season return any balance which may be due.

The marketing facilities provided by the service are thrown open to individual farmers who wish to ship direct and to groups of farmers or farmers' organizations, who arrange to ship through some local forwarding agent. Practically all types of farmers' associations have made use of the service, including Women's Institutes, Local U. F. A.'s, Local U. F. W. A.'s, Co-operative Stores, Creamery Associations, and Agricultural Societies.

When a local association takes up the matter of marketing eggs and poultry through the service the usual plan is for the executive of the association or a special marketing committee to arrange with one or

more of the local merchants to act as forwarding agent for the farmers of the community. The storekeeper is usually paid as remuneration, a commission of 1c per dozen or 30c per case.

THE "QUALITY PAYMENT" PRINCIPLE APPLIED.

The fault with the old system of marketing has been in the storekeepers' persistent practice to disregard quality. This applies particularly to eggs. Investigation has shown that approximately seventy per cent. of the deterioration which occurs to market eggs, occurs on the farm. This is not the farmer's fault particularly. It is the direct result of the storekeeper's total disregard of quality. He buys eggs "straight count" and not according to quality or actual market value. On the retail market there is frequently a differential of as much as 20c between the price of a dozen of the best grade and a dozen of the poorest grade of eggs. Many consumers exercise a distinct preference for the better quality and are willing to pay a higher price for the grade which they prefer.

The objection is that this preference of the consumer has not been expressed to the producer in terms of dollars and cents.

The Egg and Poultry Marketing Service has corrected the system at this point. According to the improved system the storekeeper discontinues to buy and sell outright. He becomes the producer's forwarding agent. He packs each farmer's lot of eggs in such a way that it may be identified at the grading station and a report is returned to him from the grading station, showing the quantity of each grade supplied by each producer, and the amount due, which is worked out on a basis of the market value of each grade. He deducts his commission and places the balance to the credit of the producer's account or pays him in cash.

AN IMPROVEMENT IN QUALITY.

Already there is apparent an improvement in the general quality of the eggs and it follows naturally that when nothing is paid for bad eggs efforts will be made to eliminate this variety and when a premium of several cents per dozen is secured for the higher grade efforts will be made to supply as large a proportion of that grade as possible. This policy has already brought satisfactory results, in the form of favorable comments from local and outside markets, both as to the high quality of the product, and the accuracy and uniformity of the grading.

Since the poultry business is so eminently suited to the climate and the conditions in the Province of Alberta, and there is every evidence of an almost unlimited market for poultry products, the marketing service has made it a point to be particularly painstaking in grading and preparing shipments of Alberta eggs and poultry for consignment to markets outside the Province.

A GROWING INTEREST IN POULTRY PRODUCTION.

The work of the marketing service has helped to place the farmers' poultry department on a proper business basis. The application of the "Quality Payment" principle, has resulted in the elimination of loss and a general improvement in quality. This naturally has been followed by

better prices. But it is especially the greater efficiency in production which has brought the farmer better returns. Farmers and farmers' organizations are devoting more time and attention to this phase of farming. This growing interest has been particularly apparent at the numerous public meetings which have been held throughout the country by officers of both Dominion and Provincial Departments, who are co-operating in the whole marketing movement.

EGG AND POULTRY MARKETING SERVICE.

EGG RECEIPTS.

Shipping Point	Dozen	Extras	Grading		Bad	Amount
			Ones	Twos		
			Cracks			
Aldersyde	906-10	459-0	445-5	2-5	8	313.63
Alix	337-9	193-6	144-0	-3		155.55
Acme	102-0	27-1	74-11	....		34.29
Blackfalds	2,188-3	913-7	1,265-0	9-8		735.64
Bowden	2,991-9	853-6	2,113-7	24-8		990.11
Blackie	8,031-9	4,086-9	3,918-7	26-5		2,785.33
Botha	570-0	303-4	261-10	1-10		203.63
Brant	3,116-6	1,253-7	1,836-4	26-7		1,026.14
Calendula	672-0	443-4	226-6	2-2		248.39
Carstairs	4,217-8	2,034-8	2,173-1	9-5		1,472.64
Carbon	120-0	19-3	90-1	10-8		33.48
Carmangay	2,999-6	1,061-10	1,911-4	26-4		1,019.27
Camrose	4,041-11	1,340-3	2,681-10	19-10		1,325.83
Cayley	3,089-10	1,205-0	1,864-5	20-5		1,052.95
Cheadle	359-9	192-0	165-9	2-0		123.95
Clareholm	1,042-6	254-7	773-11	14-0		343.17
Clive	6,649-4	2,625-11	3,967-8	55-9		2,283.00
Consort	2,189-2	1,306-9	880-1	2-4		774.69
Crossfield	172-10	66-5	106-5	....		57.19
Craigmyle	89-8	52-1	37-4	-3		28.90
Dalemead	1,209-9	522-5	682-1	5-3		411.83
Delia	1,257-4	407-4	846-0	4-0		420.66
Didsbury	401-10	142-10	257-7	1-5		138.02
Eckville	1,637-11	387-1	1,239-11	10-11		1,562.84
Elnora	3,146-4	1,293-3	1,837-11	15-2		1,057.36
Erskine	3,677-6	1,094-3	2,530-9	52-6		1,192.44
Gadsby	3,225-6	1,773-10	1,435-9	15-11		1,090.19
Grainier	390-0	63-9	316-0	10-3		123.22
Gwynne	60-0	7-0	52-10	-2		20.25
Hanna	801-5	130-1	664-9	6-7		259.66
Halkirk	2,458-8	956-3	1,483-5	19-0		835.41
High River	3,831-11	1,768-5	2,058-5	8-1		1,331.10
Hill End	419-0	287-3	131-3	-6		158.00
Huxley	448-8	250-1	197-7	1-0		157.06
Hespero	2,189-0	846-4	1,329-0	13-8		755.15
Innisfail	15-0	11-4	3-8	....		5.64
Irma	567-9	170-8	390-3	6-10		186.79
Jenner	2,969-6	1,221-6	1,729-6	18-6		1,015.46

Shipping Point	Dozen	Extras	Grading		Bad	Amount
			Ones	Twos		
			Cracks			
Killam	1,054-6	676-8	376-8	1-2	\$	371.52
Kitseoty	169 0	79-1	88-8	1-3		61.02
Langdon	1,739-0	563-10	1,152-9	22-5		575.20
Lousana	566-8	258-9	306-11	1-0		194.08
Manyberries	30-0	3-2	26-8	-2		11.86
Mazeppa	240-0	169-9	70-1	-2		83.98
Markerville	5,938-10	2,308-1	3,572-11	57-10		2,060.64
Macleod	1,847-9	849-1	986-0	12-8		624.71
Mound	205-9	52-11	146-10	6-0		63.80
Nanton	564-11	314-5	249-4	1-2		202.26
Namaka	1,177-5	611-5	564-4	1-8		411.09
Nemiscam	240-0	155-11	83-8	-5		84.40
Nightingale	390-0	221-6	168-6	....		136.31
Orion	1,129-11	346-5	772-2	11-4		390.72
Orton	180-0	119-8	60-3	-1		63.18
Oven	449-8	217-1	231-4	1-3		161.83
Olds	90-0	26-3	62-10	-11		29.35
Okotoks	30-0	16 4	12-0	1-8		9.34
Parkland	1,110-0	687-3	420-5	2 4		392.23
Penhold	8,642-7	3,739-5	4,841-3	61-11		2,916.32
Pincher Creek	328-10	84-9	243-6	-7		106.34
Ponoka	232-2	85-10	143-3	3-1		76.10
Quarrel	749-8	130-10	530-2	28-8		231.81
Red Deer	2,852-7	1,059 10	1,764-2	28-7		984.46
Retlaw	892 5	217-7	665-3	9 7		280.05
Richdale	299-5	49 7	246-10	3-0		94.98
Seven Persons	750 0	276-11	167-4	5 9		254.55
Sibbald	150 0	61-3	87-7	1 2		55.08
Swalwell	443-8	227-5	215-6	-9		156.41
Stettler	441 1	238-5	199-2	3-6		154.33
Standard	269-10	70 10	197-1	1-11		90.25
Sylvan Lake	10,466-6	3,280 2	7,109-10	76-6		3,557.73
Tees	224 6	54-0	167 5	3-1		75.09
Three Hills	704 9	290 7	409-5	4-9		244.48
Throne	1,132-10	621-3	507-1	4-6		398.82
Trochu	655 7	268-0	383 3	4-4		219.82
Veteran	360-0	28-6	323-1	8-5		125.42
Wetaskiwin	94-6	18-7	74-8	1-3		30.79
Whitla	150-0	82-4	63-10	3-10		52.04
Total	119,593-5	48,589-9	70,180-3	823-5		\$40,791.19

REPORT OF THE RECORDER OF BRANDS

SIR, I have the honour to submit the following report on the work of this branch of your department for the year 1918.

During the year 2,161 horse and 3,455 cattle brands were allotted and recorded to their respective owners, while 617 transfers and 40 changes were duly registered. Certified extracts of brands numbered 12, while searches and strays numbered 973, being a total of 1,258 transactions.

Compared with the previous year (1917) these figures show an increase of 322 horse and 85 cattle brands, 86 transfers, 7 changes and 319 searches and strays, while certified extracts decreased by 7, being a total increase for the year of 812 transactions.

The following table shows the different transactions which have taken place since separate records for the Province have been kept:

Year	Horse	Cattle	Trans.	Changes.	Extracts Strays & Searches.
1906	1361	1894	384	38	73
1907	1030	1230	430	28	73
1908	1103	1225	421	29	292
1909	1308	1326	430	33	783
1910	1891	1672	524	34	1218
1911	1538	1280	362	32	1408
1912	1545	1542	374	16	1655
1913	1471	2059	419	11	1795
1914	1764	2629	395	18	1932
1915	1350	1899	743	27	1372
1916	1503	2833	462	28	801
1917	1839	3370	531	33	673
1918	2161	3455	617	40	985
Average 13 years	1528	2032	469	28	1005

From the above statement it will be seen that the horse brands issued during the year exceed that of the average of the past thirteen years by 633, while the cattle brands exceeded the average by 1423. Notwithstanding the large increase in cattle brands which took place during the year 1917, it will be noted that this year the figures show an increasing demand for cattle brands.

The past year's horse brands exceed those of any previous year and form a new record.

The following statement shows the number of renewals and re-allotments of brands to old owners, issued since this was instituted in 1915:

	1915	1916	1917	1918
Brands renewed during the year 1915	7805			
Brands renewed during the year 1916		2869		
Brands re-allotted during the year 1916	510			
Brands renewed during the year 1917		519	4169	
Brands re-allotted during the year 1917	431	120		
Brands renewed during the year 1918			949	3981
Brands re-allotted during the year 1918	247	95	199	
Total number of brands renewed and re-allotted	8993	3603	5317	3981
Percentage of renewals	39%	50%	56%	50%



BEEF SIRES AT THE INTERNATIONAL.

Of the brands issued prior to the 1st of January, 1907, and which should have been renewed on or before the 31st of December, 1915, it will be seen that no fewer than 1188 have been re-allotted to old owners during the years 1916, 1917 and 1918, and these now show the percentage of renewals for that year as 39%. The brands requiring to be renewed during 1916, have had 215 re-allotted to previous owners and increases the number of renewals for that year to 50%. While for the year 1917, there have been re-allotted to former owners 199 brands, which increases the percentage of renewals for that year to 56%.

The renewals for the year 1918 of brands allotted during the years 1913 and 1914 amount to 3981, and, as was expected, the nearer we approach the date of original issue the higher the rate of renewals. Last year the percentage of renewals was 44%, while this year the rate has risen to 50% of the original allotments with a number of applications for renewal received but not yet recorded.

Owing to the large demand for new cattle brands, during 1917 and 1918, it was again found necessary to have a new series of brands approved by the Brand Commissioners, and as the first of the old cancelled brands will not be available for allotment till after the 31st of December, 1919, it will, I think, be necessary to hold a meeting of the Brand Commissioners during the early spring or summer.

The number of documents received during the year was 16,039, while the number of documents despatched was 41,442, making a total of 57,481.

Yours obediently,

JAS. WILSON,

Recorder of Brands.

REPORT OF CHIEF GAME AND FIRE GUARDIAN

SIR.—I have the honour to submit herewith my Thirteenth Annual Report in connection with the enforcement of The Game Act and The Prairie Fires Ordinance for the year 1918.

I.—PROTECTION OF GAME.

GAME BIRDS.

Game conditions for the sportsmen in 1918 were not as favorable as usual. The months of May and June, of course, were ideal, as there were very few prairie fires and very few, if any, cold rains; the result being that, with the grouse especially, the young birds met with no setbacks and a fair supply was available during the open season. This was noticeable chiefly with respect to the prairie chicken (sharp-tailed grouse). The partridge (ruffed grouse) did not show up quite so well. The season of 1917 and 1918 being unusually dry the result was that many of the sloughs and small lakes dried up, which resulted in reducing the number of available breeding places for water fowl. When the season opened on September 1st, in many sections of the country where there had previously been good shooting, there were very few ducks to be found owing to the lack of water, consequently they were more plentiful on the larger bodies of water and those sportsmen who went far enough afield usually secured good bags.

The market hunters were more numerous than in any year since 1914.

BIG GAME.

From the standpoint of the big game hunter there have now been several unfavorable seasons, i.e. for hunting. Lack of snow during the greater portion of the hunting season has made it difficult to hunt successfully.

Moose hunters in some instances discovered that where moose were plentiful in 1917 very few, if any, were found in 1918. This, no doubt, was due to the fact that these animals periodically change their feeding ground, and in sections where they were plentiful in 1917 and previous years they may not become numerous in these localities again for some years.

The death of two hunters has been reported who were unfortunately shot by their hunting companions, being mistaken for big game animals. It is hoped that occurrences of this kind will not increase from year to year with an increase in the number of hunters. It would be well to endeavour to avoid a repetition of such unfortunate occurrences by requiring all big game hunters to wear a complete outer suit of some white material. This has been tried by some of the Provinces east of us and I understand with good results to sportsmen. Alberta has been very fortunate in this respect, as there have been very few accidents of this kind in recent years, more especially since The Game Act was

amended, making it an offence to kill females and animals under one year of age.

Below is a statement showing the number of big game animals killed each year from 1907 to 1918 inclusive:

	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918
Antelope	49	45	89	126	101	105	119	...	...	...	...	...
Moose	14	37	86	184	305	425	865	1335	1116	849	1026	900
Caribou	...	...	5	8	30	40	56	78	34	28	43	45
Mountain Sheep	...	...	40	54	49	90	65	78	110	83	57	76
Mountain Goat	...	...	38	46	56	58	42	61	40	26	37	43
Elk	...	...	...	7	...	...	...	...	1	...	...	...
Deer	59	125	299	540	619	768	908	1388	692	560	705	828

FUR-BEARING ANIMALS.

Fur-bearing animals still continue to be extremely scarce. Although prices on all furs are extremely high, much higher than in former years, the difference will not be sufficiently great to make up for the scarcity as trappers are securing very poor results. It must not be expected that we will get a great increase in the number of fur-bearing animals until rabbits, their natural food, again become numerous.

In the southern half of the Province beaver are still numerous, and are causing considerable damage and inconvenience in places. Permits are granted in all cases where it is believed that these animals are causing damage, the result being that on permits issued and which expired on the first day of May there were reported 837 skins, which were branded and returned to the owners. The new regulations, which provide that the skins taken under permits shall be sold by the Department of Agriculture by tender, 75% of the proceeds forwarded to the owner of the skins and 25% deposited in the General Revenue of the Province, should prove more satisfactory to the people of the Province than the former regulations which allowed the owner of the skins to keep them, the Province thereby receiving no benefit whatever in the form of revenue to cover the expense of administering the regulations and the provisions of the Act. These animals have been protected since 1902, the cost of such protection being defrayed by the people of the Province as a whole. It is considered reasonable that those who are now benefitting from the trapping of beaver should contribute something towards the cost of protecting them. No permits are granted unless it is shown that the animals are causing damage.

SALE OF GAME.

The following table shows the number of game birds and big game animals marketed as shown by returns of Game Dealers and Market Hunters from 1913 to 1918 inclusive:

	MARKET HUNTERS.						
	1913	1914	1915	1916	1917	1918	
Deer	7	14	5	..	2	1	
Moose	13	34	17	10	15	14	
Caribou	3	1	..	1	..	..
Geese	56	25	..	29	38	5	
Swans	..	..	..	..	..	..
Ducks	15,339	3,892	7,394	9,973	3,391	2,594	
Mountain Sheep	..	2	..	..	2	..	

GAME DEALERS.

	1913	1914	1915	1916	1917	1918
Deer	6	18	6	1	2	2
Moose	23	39	20	17	13	16
Caribou	3	..	..	1	..	..
Geese	76	..	..	..	..	1
Swans	1	..	..	..	..	..
Ducks	16,564	3,497	5,940	11,481	5,082	5,388
Mountain Sheep .....	..	..	..	1	..	..

BRANDING GAME HEADS.

Section 11 of the Act requiring the branding of game heads before buying or selling shows the following results:

	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918
Mtn. Sheep ..	216	2	9	11	2	6	4	4	15	8	6	2
Mtn. Goat	62	..	1	1	1	2	2	2	..	..	..	..
Elk	41	3	4	2	2	1	..	..	1	3	..	..
Moose	39	29	33	32	40	40	48	42	30	22	10	19
Caribou	16	6	6	2	3	3	2	5	1	1	..	2
Deer	142	15	26	26	40	40	24	32	15	12	15	12
Antelope	95	5	..	3	3	3	3	10	..	..	..	6

LICENSES AND PERMITS.

In spite of conditions created by the Great War numbers of hunters availed themselves of the opportunity of hunting game birds, there being some seventeen hundred more persons who purchased licenses for this purpose than there were in 1917. It is possible that this may be accounted for to some extent by their being permitted to hunt prairie chicken and partridge.

The close season of 1917 on these birds undoubtedly affected the sale of licenses to some extent. There were 118 more big game licenses sold than in 1917. Some sixteen fewer General Game Licenses were issued and fifteen more Non-residents' Bird Game Licenses. There was a falling off in the number of Guides' and Camp Helpers' Licenses issued, no doubt due to the fact that there were fewer big game hunters from outside the Province. Game Dealers' Licenses show an increase of five, while Market Hunters' show an increase of fifteen.

The following table shows the number of licenses and permits sold each year from 1907 to 1918 inclusive:

	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918
Gen. Game Licenses.	4	7	17	24	24	28	32	25	32	32	40	24
Bird Game Licenses.	..	..	3	3	67	67	68	34	49	60	24	39
Res. Big Game Lic.	446	529	1162	1997	813	1043	1378	1319	912	714	833	752
Res. Far. Big Game.	..	..	..	..	2118	2917	4260	5982	5015	3439	3979	4177
Res. Bird Game Lic.	..	..	..	..	7452	9519	13021	9674	7493	6549	6477	8195
Guides' Licenses	6	3	7	8	13	21	24	14	16	18	16	11
Camp Helpers' Lic.	1	1	1	4	5	5	5	1	6	1	11	7
Game Dealers' Lic.	12	23	39	39	16	26	23	39	29	34	26	31
Market Hunters' Lic.	..	..	..	..	60	75	169	125	52	58	54	69
Permits to Export ..	15	17	19	35	24	27	38	120	121	57	64	35
Permits to Collect...	6	6	16	23	7	7	2	561	5	2	..	..
Trappers' Licenses ..	6	4	1	10	14	26	46	..	2	6	5	3

CONVICTIONS AND FINES.

The different offences are classified as follows and cover the years 1908 to 1918 inclusive:

	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918
For hunting on Sunday...	12	4	4	9	..	7	19	7	9	18	11
For hunting in close season	11	36	29	23	6	11	21	15	7	10	16
Buying and selling unbrand- ed heads	8	6	3	1	..	2	1	2	5	..	1
Hunting without license..	7	6	14	17	1	6	20	15	22	1	4
Taking females .....	..	..	..	4	..	2	5	10	7	3	5
Selling without a license	7	7	..	1	2	..	..	6	8	1	7
Miscellaneous offences ...	4	2	9	7	71	93	52	33	22	16	13

REVENUE FROM GAME.

It is satisfactory to again be able to report a surplus from the sale of game licenses, permits, etc., over and above expenditure. This surplus for the year 1918 is \$2,726.08. This now makes a surplus over and above expenditure since the organization of this branch of your Department of \$42,812.83.

The revenue from the sale of game licenses and permits could be greatly increased if all residents of the Province were required to purchase a license before hunting or shooting game birds. A requirement of this kind would bear fairly on all hunters and not as it does at present. A portion only of the sportsmen are required to purchase licenses before hunting game birds, the money which they contribute for this purpose, of course, being spent, or its equivalent being spent for the protection of game while others have the privilege of shooting without contributing anything for its protection. It would simplify very much the enforcement of the Act with respect to the purchasing of licenses before hunting game if in addition to those who are now required to purchase licenses for this purpose, farmers, sons of farmers and the members of their families were required to do so. This would be only a fair and proper requirement, especially when hunting on land other than their own.

It would also be right to secure revenue from the sale of licenses to fur dealers, taxidermists, cold storage plants and to secure also export fees on pelts of big game animals. Such licenses and permits are required in other Provinces and States. In the case of fur dealers the regulation works out very unfairly to one who is a resident of Alberta and has an established place of business, and who thereby contributes to the revenue of the Province in the form of taxes. On the other hand fur dealers from other Provinces where licenses are required do business in Alberta without contributing anything towards the revenue of the Province, either directly or indirectly, while the Alberta buyer or dealer, if he wishes to buy fur in any of the other Provinces, is compelled to buy a license.

REVENUE FROM GAME—MONEY COLLECTED.

Licenses, etc.	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918
General Game	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Bird Game	.....	93.00	175.00	425.00	600.00	600.00	700.00	800.00	625.00	800.00	800.00	1,000.00	600.00
Trappers	.....	40.00	40.00	45.00	45.00	335.00	335.00	340.00	170.00	245.00	300.00	120.00	135.00
Res. Big Game	.....	115.00	1,322.50	10.00	10.00	140.00	260.00	460.00	.....	50.00	150.00	125.00	15.00
Res. Far. Big G.	.....	.....	.....	2,905.00	4,092.50	2,032.50	2,697.50	3,445.00	3,297.50	2,890.00	1,785.00	2,082.50	1,882.50
Res. Bird Game	.....	.....	.....	.....	.....	2,118.00	2,917.00	4,200.00	5,982.00	5,015.00	3,439.00	3,979.00	4,117.00
Guides	.....	.....	.....	.....	.....	9,315.00	11,898.00	16,276.25	21,766.50	16,868.25	14,735.25	14,573.25	18,438.75
Camp Helpers	.....	30.00	15.00	35.00	40.00	65.00	195.00	120.00	70.00	40.00	45.00	40.00	27.50
Game Dealers	.....	.....	2.50	2.50	10.00	25.00	25.00	25.00	5.00	15.00	2.50	27.50	17.50
Market Hunters	.....	120.00	230.00	330.00	300.00	300.00	260.00	230.00	330.00	290.00	300.00	260.00	310.00
Per. to Export	.....	171.00	92.00	50.00	76.00	11.00	375.00	845.00	625.00	260.00	290.00	270.00	345.00
Per. to Collect	.....	65.00	50.00	55.00	45.00	35.00	65.00	78.50	13,875.00	3,766.50	461.50	597.00	108.00
Branding	.....	2,758.00	240.00	344.00	295.00	323.00	246.00	328.00	2,905.00	25.00	10.00	.....	.....
Confiscated G.	.....	.....	.....	104.00	108.75	30.00	45.00	20.00	343.00	265.00	194.00	110.00	151.00
Fines	.....	154.00	337.50	447.50	328.00	700.00	861.00	1,667.50	1,759.93	1,417.78	1,400.90	756.82	721.50
Total Revenue	\$ 145.00	\$3,948.50	\$2,504.50	\$4,793.50	\$6,940.25	\$10,219.50	\$29,734.50	\$28,905.28	\$54,628.50	\$31,335.49	\$23,083.15	\$23,866.97	\$27,370.79
Total Exp.	\$1,929.69	\$2,216.62	\$4,923.60	\$5,579.30	\$4,766.29	\$8,935.00	\$11,942.47	\$19,164.51	\$30,845.08	\$29,688.81	\$26,819.44	\$29,606.51	\$24,644.52
Surplus	.....	\$4,731.88	.....	.....	\$2,174.05	\$7,284.50	\$6,692.33	\$9,740.77	\$23,783.51	\$1,646.63	.....	.....	\$2,726.08
Deficit	\$1,784.69	.....	\$1,819.10	\$786.40	.....	.....	.....	.....	.....	.....	\$2,826.29	\$5,740.44	.....

Surplus over and above expenditure for years 1906 to 1918, \$12,842.82.

The following licenses were issued to Treaty Indians free of charge on the strength of a certificate from their Agent, as provided for by Section 19c of The Game Act:

Resident Farmers' Big Game Licenses 132

Respectfully submitted,

BENJ. LAWTON,

Chief Game Guardian.

MUSEUM.

Owing to there being no monies granted by the Legislature for museum purposes very little progress has been made towards securing further specimens. Several specimens, of course, were confiscated in favor of the Department and these were mounted for the museum. The following are the specimens received during the year, which have been added to the collection:

- 4 Young Coots.
- 2 Great Blue Herons.
- 1 Carolina Rail.
- 1 Deer Head in the velvet.
- 2 Snow Buntings.
- 1 Mourning Warbler.
- 1 American Marmot.

It is important that no opportunity should be missed to secure specimens of animals and birds from time to time, as there are some rare varieties which one cannot always depend on securing, unless prepared to take advantage of the opportunity whenever it offers. It is important if a proper museum is to be established that progress should be made from year to year and specimens, which are now available, secured before the animals become extinct. It is desirable that funds be made available for this purpose for the coming year.

Respectfully submitted,

BENJ. LAWTON,

Chief Game Guardian.

WOLF BOUNTY.

The regulations in force with respect to the payment of bounty on wolves has been continued during the year 1918 and has resulted in the payment of bounty on fifty-four female timber wolves, seventy-four male timber wolves, five timber wolf pups and forty female prairie wolves.

The high prices prevailing for the pelts of wolves have been an inducement to the hunter and trapper and although the scarcity of rabbits, which are the natural food of the prairie wolf, may to some extent account for the number of these animals being fewer than in former years, the scarcity can be attributed to some extent to the high prices prevailing for the pelts.

If the payment of a uniform bounty by all the Provinces could be arranged it would simplify matters very much in cases where pelts on which bounty is claimed may have come from some other Province. I am satisfied that there is a tendency on the part of those claiming bounty, especially where animals have been killed near the inter-provincial boundary, to make their claim for bounty in the Province which pays the largest sum.

Respectfully submitted,

BENJ. LAWTON,

Chief Wolf Bounty Inspector.

PRAIRIE FIRES.

It is satisfactory to report that during the year 1918 there were not as many prairie or forest fires as it would be natural to expect during such a dry year, the rainfall being much less than usual. The Alberta Provincial Police gave excellent service in the matter of the prevention of prairie fires and prosecuting cases which came under their notice.

Amendments to the present Ordinance or the enactment of a new Act entirely with more stringent provisions relating to the controlling of fires in the vicinity of forested or timbered areas would be of great benefit in protecting such areas. The present Ordinance works out very well in so far as prairie fires are concerned, but it is not satisfactory in areas tributary to timbered country.

As in previous years this branch of the Department spent considerable time inspecting the fire guards along the different railway lines of the Province, and the results have been reasonably satisfactory although there is room for some improvement. There were not nearly as many fires kindled by railway companies as in former years. This is no doubt due to their complying with the requirements of the regulations of the Board of Railway Commissioners in the matter of constructing fire guards and in destroying inflammable matter along their rights of way.

There was an increase in the number of convictions secured in 1918, penalties totalling \$946.90, the average being \$23.67. The convictions reported and the total penalties imposed for the years 1907 to 1918, inclusive, are as follows:

Year	No. of Convictions Reported	Total	Average Fine
1907	33	\$ 741.00	\$22.45
1908	105	1,570.00	14.95
1909	94	1,796.00	19.10
1910	247	4,247.38	17.20
1911	33	565.00	18.25
1912	56	1,008.00	18.00
1913	48	948.75	20.52
1914	89	1,395.93	15.68
1915	39	684.16	17.47
1916	113	2,121.19	18.77
1917	35	888.00	25.37
1918	40	946.90	23.67

Respectfully submitted,

BENJ. LAWTON,

Chief Fire Guardian.

REPORT OF THE CROP STATISTICIAN

SIR, I beg to submit herewith the report of weather and crop conditions together with statistical tables relating to temperature and precipitation and the yields of the different kinds of grain grown in the Province, as well as the numbers of livestock.

Respectfully submitted,

J. McCAIG,

Chief Publicity Commissioner.

MONTHLY WEATHER REPORT FOR YEAR.

January.

EDMONTON.—Bright sunshine 48 hours. The month was remarkable for low hanging clouds with intermittent snow, decidedly low temperature with unusual amount of wind; temperature moderating at close; sleighing excellent; river ice 2 feet thick; snow on ground 3 inches; drifts 2 feet.

CALGARY.—Five inches snow on ground; moderate month; two Chinooks during the month; 30 inches of ice on river.

MEDICINE HAT.—Weather during the month rough but no storms. No reports of shortage of feed for stock; everything in usual good order; farmers beginning to inquire about help.

February.

Everywhere the temperature was more moderate than customary, attended by much bright sunshine and an absence of many high winds.



BACK TO PEACE PURSUITS.

March.

The weather on the whole was unusually mild and by its close the rivers were almost free of ice; the snow and frost had in many districts disappeared from the ground and everything was favourable for an early start of work on the land.

EDMONTON.—The weather for the most part was mild with good average sunshine; no farming activities reported from surrounding districts; river ice unsafe for traffic; on the 31st wheels now general; 193 hours of sunshine.

CALGARY.—No snow on ground; roads in good condition; rivers clearing rapidly; geese flying north.

MEDICINE HAT.—Farmers ready for seeding; the land in many places quite dry enough to seed; some losses of stock reported; average daily sunshine 6 hours; ice broke in Saskatchewan River on the 22nd.

April.

A moderate rain occurred on the 14th of this month.

EDMONTON.—Month opened mild and clear; spring conditions early, enabling good progress in farm operations to be made. Fall of snow on 24th considered beneficial to wheat sown. Precipitation small; river ice moved out on 10th; rise in river during month 10 feet, 9 inches. Moderate to strong winds prevalent during month, chiefly from northwest. A gale on the 20th reached a velocity of 38 miles per hour. Month closing fair and moderately warm; 275 hours of sunshine.

MEDICINE HAT.—Seeding well advanced, grass growing nicely; good feed for stock; close to ten hours daily sunshine. Nearly all the migratory birds arrived.

May.

EDMONTON.—The month opened fine and moderately warm with an average of 10.8 hours of bright sunshine for the first seven days; the light winds quickly gave way to strong cold winds mostly N.W. with a maximum velocity 28 miles per hour on the 15th; precipitation in latter half of month has to some extent made good the lack of moisture previously felt; the snowfall beneficial, but the heavy frosts that have been prevalent through the West have set back the crops. It is considered that about 75 per cent. of these will make good. It would appear that this month of May had been the coldest for many years.

MEDICINE HAT.—Farmers not treating new land on account of it being too dry; crops backward; stock doing well; rain much needed.

June.

EDMONTON.—June opened fair, cool and showery; precipitation about average. Crops in surrounding districts very promising; wheat and oats very good; timothy short and poor; stock in fine condition; river very high on 16th, registering 63 feet, now normal; month closing clear and warm; bright sunshine 361 hours.

CALGARY.—Not much rain for the month of June; some land will not give seed back; late sown grain will be fair; will be shortage of hay this fall; rivers very high about the middle of the month.

SION.—Grass not as good as last season; early and late frosts played havoc with early growth; grain looking fair, some very good; cut-worm is plentiful this season and all vegetation is suffering badly. Turnip fly, cabbage fly, beet-root fly exceptionally bad. Not enough sun.

LACOMBE.—First three weeks of June were windy, warm and dry. Early sown crops made slow growth due to insufficient moisture, and in certain areas to drifting sand. Rain fell during the last week over large portion of Central Alberta sufficient for immediate need of grain crop; hay crop will be light.

July.

EDMONTON.—July opened cloudy, warm and showery; precipitation much below normal; first frost on 24th, killing vines and blighting garden produce; wheat very much affected thereby, and farmers are cutting same for



ALBERTA FLAX.

green feed; several thunderstorms in and heavy hail east of Edmonton causing no damage; river rose in middle of month, now normal; month closed very warm and clear.

LACOMBE.—First ten days of the month were hot and dry; rains from the 12th amounting to about 1.75 inches, proved insufficient to carry crops and improve pastures; frosts on night of 23rd damaged crops at many points from Wetaskiwin north and east, and from Stettler east; crop outlook poor to fair.

MEDICINE HAT.—Crops very poor; prairie farmers going north for hay; many fields are being ploughed up; wheat is a failure; abundance of hay reported in northern part of the province; stock on prairie pasture alone are not in very good condition.

LETHBRIDGE.—Drought in Southern Alberta partly broken by rains which were general during week beginning 21st, but as less than one inch fell more must come at once to improve conditions much, though it will aid in filling of grain. Everything is a failure, except that sown on summerfallow.

August.

EDMONTON.—Month opened warm with intermittent thunderstorms in surrounding district; wheat cut and stooked since the 16th; oats and barley now in process of cutting; crops much better than anticipated after the early frost last month; fall breaking in some parts commenced. August closed with strong cold northeast winds.

CALGARY.—Rain on sixteen days of the month improved the crop 100 per cent. Ducks very plentiful

LETHBRIDGE.—Wheat harvest in Southern Alberta well advanced. In many localities in drier districts it is already completed and threshing in isolated cases started. This part of the Province will produce enough wheat for seed next season and have some to spare, but the oat and barley crop is almost nil.

MEDICINE HAT.—Late rains have improved crop conditions. Some will have a little grain and green feed where none was expected. Pasture is fair in many places; hay is very scarce and many farmers are depending on the northern part of the Province for their supply.

LACOMBE.—First week of August dry, last week about four inches of rain fell greatly improving green feeds and pastures, and relieving the feed situation materially; later grain for threshing also filled better than expected, barley 90 per cent; oats 35 per cent; wheat 50 per cent. harvested; quality good.

September.

September was a fine month with the mean temperature above average in Alberta; the only rain which was at all general fell on the 22nd and 23rd. There were no severe frosts.

EDMONTON.—Total bright sunshine 222.9 hours. Month opened clear and cool with light hoar frost; from the 21st to 24th steady fine rain interrupted harvesting operations; on the 25th splendid weather drying out stooks; stacking and threshing now proceeding; all roots up; fall plowing, discing and packing going forward. All grain east of the city very disappointing; oats particularly light. River temperature uniform, height normal.

CALGARY.—Exceptionally fine weather for past month; no frost until last day of the month; ducks flying south; crop yields not as bad as expected.

MEDICINE HAT.—Pasture on prairie fair; threshing about completed; not much fall plowing, ground too dry; farmers busying themselves procuring hay from the northern part of the province.

LACOMBE.—Good harvest and threshing weather; towards the close of the month, heavy rains; no frost damage; yields of grain in this section fair, with quality good. Ploughing in progress; moisture supply satisfactory.

October.

EDMONTON.—Month opened clear and cold, becoming warmer with strong southwest and northwest winds; heavy frosts during the third week and light snow during the latter part of month; closing cloudy with higher temperature. Threshing almost over; crops very light; fall ploughing still in progress; 170 hours of sunshine.

CALGARY.—Fine weather for this time of year; ground not frozen.

MEDICINE HAT.—Farmers doing what they can to get their fall plowing done and otherwise preparing their land for spring. Pasture not good. Much hay coming in from the north and stock is being fairly well provided for.

November.

November weather was exceptionally fine and mild with very few high winds, a large amount of sunshine and very little precipitation, except in the more unsettled districts.

EDMONTON.—The month has been mild throughout with good average sunshine and a very light snowfall; farming activities finished. River frozen over the 21st; ice twelve inches thick, not safe for traffic.

CALGARY.—No snow on ground; rivers not frozen; ground scarcely frozen; exceptionally mild month.

MEDICINE HAT.—Farmers fairly well prepared for winter in stock feed, most of which was shipped from northern points; fuel plentiful; most farmers have in winter supply.

December.

The weather was very fine with abnormally high mean temperature.

EDMONTON.—December has been a particularly mild month with average sunshine; snow blizzard swept Edmonton and surrounding districts on the 28th, leaving 10 inches of snow and drifts 4 feet high; traffic on river now safe, ice 11 inches thick; ice elevation on same 20 inches lower than December, 1917; sleighing poor. All farming activities stopped; month closing with weather moderating after storm; 81 hours of sunshine.

CALGARY.—Very warm month; good month for stock; 6 inches of snow on ground.

MEDICINE HAT.—Farmers pleased with fine weather up to the end of the month; much feed saved by open range with freedom from snow. Conditions fairly satisfactory in district.

PRECIPITATION FOR 1918.

Stations	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
NORTH SASKATCHEWAN DISTRICT												
Argyle	.....	0.20	1.88	0.68	0.80	1.74	1.47	2.46	0.38	0.04	0.39	1.90
Calmar	0.31	0.14	0.81	0.77	2.81	2.61	2.11	3.53	1.61	....	0.20	....
Campsie	1.37	0.31	0.56	0.35	1.21	2.50	2.17	2.94	1.32	0.11	0.40	0.86
Daysland	1.68	0.75	1.83	0.87	1.19	1.69	2.31	2.61	0.18	0.14	0.55	1.85
Edmonton	1.44	0.35	0.92	0.96	1.68	3.27	2.67	3.00	1.44	0.17	0.31	1.65
Elk Point	0.60	.....	1.13	0.74	1.56	1.38	2.53	1.74	0.08	0.08	0.10	0.45
Halkirk	0.92	0.18	0.27	0.21	0.69	2.02	0.65	2.11	0.94	0.03	0.05	....
Holbert	.....	.....	0.45	0.24	0.59	1.30	2.98	1.29	0.13	....	....	....
Notdeer	0.75	0.90	1.05	1.05	1.96	1.83	1.67	1.93	1.17	0.05	0.53	1.10
N. Cooking Lake	.....	.....	1.19	1.07	1.07	2.85	2.46	3.11	1.16	0.23	0.37	1.07
Red earth	1.28	0.36	1.63	0.93	1.61	2.83	3.22	3.04	0.52	0.19	0.48	0.73
Reddy Mountain House	1.20	1.30	1.50	1.09	2.11	1.80	2.42	4.04	2.09	....	0.50	....
Sodgwick	.....	.....	.....	0.54	0.56	0.91	1.47	2.07	0.27	....	T.	1.10
Sion	0.75	0.35	0.29	0.35	1.02	2.81	1.65	0.61	1.19	0.34	0.03	0.75
Stry	.....	.....	.....	1.07	1.58	2.31	2.96	2.78	0.38	0.10	0.28	0.69
Vermilion	0.85	.....	0.80	.....	0.45	.....	.....	1.36	.....	....	0.25	....
Wetaskiwin	0.30	0.30	.....	0.18	0.74	1.68	1.90	3.00	1.40	0.04	0.12	0.57
The Red Deer River District												
Alix	1.08	0.38	0.80	0.48	1.03	1.30	1.68	2.37	1.43	0.20	0.28	1.48
Al-sak	0.30	.....	.....	0.70	0.41	1.13	2.51	2.48	....	0.15	0.25	0.25
Didsbury	0.90	1.30	1.40	0.45	1.52	1.11	0.93	2.88	1.13	0.00	0.20	0.60
Hillsdown	1.00	0.45	0.96	0.48	1.41	0.90	0.81	2.29	0.69	0.09	0.05	0.95
Jenner	1.84	0.65	.....	.....	0.72	0.78	0.88	1.18	0.12	....	0.20	0.83
Lacombe (Exper. Farm)	0.53	.....	.....	0.46	1.21	1.47	1.94	3.93	1.13	0.15	1.20	0.73
Olds	.....	.....	.....	.....	1.05	0.76	0.95	2.46	0.69	....	0.05	....
Perbeck	.....	.....	.....	0.22	0.47	0.98	1.02	1.91	1.03	T.	....	0.40
Red Deer	0.90	.....	.....	0.58	0.44	1.65	0.86	2.69	1.08	0.10	0.05	0.75
Rosedale	.....	.....	.....	.....	0.44	0.80	1.19	2.65	0.68	0.03	0.05	....
Springdale	1.05	0.45	0.40	0.80	0.85	....	1.39	4.75	1.77	0.02	0.18	1.45

PRECIPITATION—(Continued).

Stations	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
BOW RIVER DISTRICT												
Bassano ..	1.38	0.50	1.05	0.78	0.36	0.34 [*]	0.37	0.71	0.51	0.07	0.14	0.60
Brooks ..	1.00	0.60	....	0.06	0.51	0.69	1.39	1.19	0.27	0.10	0.08	0.80
Calgary ..	0.30	0.60	0.44	0.29	1.34	0.26	1.35	2.54	0.97	0.11	0.10	0.82
Clareholm ..	0.50	0.53	0.50	0.90	1.31	1.22	0.64	2.23	1.78	0.81	0.25	0.80
Expanse Coulee ..	1.03	0.80	0.55	0.29	0.22	0.40	0.71	1.30	0.04	0.30	....	0.90
Gem ..	1.35	0.76	0.90	....	0.50	0.41	0.93	1.32	0.41	0.06	0.58	0.53
Gleichen ..	....	....	0.70	0.25	0.80	0.05	....	1.53	0.59	0.24	0.14	0.78
Jactbridge (Exper. Farm) ..	0.70	0.83	0.73	0.13	0.67	0.76	0.85	1.19	1.07	1.12	0.13	0.46
Lundbreck ..	1.51	0.63	0.69	0.13	1.20	1.56	1.65	2.10	0.50	0.24	0.25	0.55
Macleod ..	0.90	0.60	0.53	0.30	0.97	1.27	1.19	1.57	1.31	0.18	0.13	0.75
Medicine Hat ..	1.81	0.84	0.37	0.17	0.17	1.40	1.78	1.83	0.26	0.36	0.33	0.88
Okotoks ..	0.60	1.00	0.60	0.62	1.11	0.17	0.87	2.47	1.33	0.75	0.35	0.80
Pekisko ..	1.05	1.25	1.68	1.01	3.37	1.22	1.76	4.22	2.62	1.38	0.30	1.43
Pincher Creek ..	1.05	1.98	0.77	1.09	1.48	1.14	1.82	2.30	1.56	0.26	1.35	0.88
Ronolane ..	0.95	0.60	0.40	0.21	0.65	1.22	1.37	0.92	0.22	0.12	0.15	0.20
Sutfield ..	0.90	0.55	0.52	0.20	0.23	0.77	1.16	0.58	0.22	....	0.48	0.40
Twin Lakes ..	1.90	1.10	1.42	2.15	1.32	0.76	1.55	2.75	1.19	1.47	0.90	1.50
ROCKY MOUNTAINS												
Banff ..	0.88	1.95	1.47	0.24	2.91	0.94	1.56	3.18	1.40	0.15	0.73	2.77
Lake Louise ..	....	3.80	3.16	....	....	....	....	....	....	....	....	....
ATHABASCA RIVER												
Athabasca Landing ..	0.95	0.23	0.90	0.83	1.01	2.28	2.62	3.50	0.26	0.16	0.40	0.60
Athabasca ..	....	....	....	....	....	2.29	3.31	3.22	0.29	0.15	0.60	0.43
Edson ..	0.88	0.25	0.30	0.30	1.00	....	....	....	....	0.20	0.25	0.40
Entrance ..	1.03	0.10	0.45	0.05	1.03	1.10	1.30	0.74	0.25	....	....	0.15
Jasper ..	0.91	0.65	....	0.19	1.39	1.75	0.98	0.84	0.49	....	0.43	....
Meenook ..	1.37	0.55	1.38	0.80	1.72	2.51	2.87	3.99	0.42	0.12	0.71	0.62
Wabasca ..	1.00	0.30	....	0.58	0.90	3.41	2.88	3.36	0.50	0.58	0.40	0.65

PRECIPITATION—(Continued).

Stations	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
PEACE RIVER DISTRICT												
Fort Assiniboia	.....	0.73	0.43	0.05	2.86	1.21	1.26	2.77	0.20	1.56	0.75	0.13
Grainne Prairie	1.13	1.20	1.36	0.60	0.22	1.70	.....	.....	.....	.....	0.55	1.10
Ground	1.13	.....	.....	.....	.....	1.81	2.87	2.29	0.58	0.33	0.30	0.70
Peace River Crossing	0.85	0.50	0.91	0.45	0.42	2.83	0.92	1.88	0.29	0.66	0.20	0.15

TEMPERATURE—MAXIMUM AND MINIMUM.

STATION	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
NORTH SASKATCHEWAN RIVER												
Argyle	{ Maximum ..	43	68	76	81	90	96	98	85	75	58	44
	{ Minimum ..	-43	-38	-12	13	27	20	31	19	2	-4	-12
Calmar	{ Maximum 47	55	63	72	76	83	89	84	80	..	59	..
	{ Minimum ..	-47	-40	-38	-4	19	26	31	25	..	5	..
Campsie	{ Maximum 52	51	57	73	76	84	91	84	80	69	58	43
	{ Minimum ..	-46	-48	-5	14	23	26	29	22	4	-17	-16
Daysland	{ Maximum 44	47	65	73	78	88	92	88	82	69	52	42
	{ Minimum ..	-37	-31	-4	19	28	25	36	25	6	1	-10
Edmonton	{ Maximum 44	53	62	71	76	83	90	83	69	69	56	45
	{ Minimum ..	-43	-28	2	21	31	29	36	27	7	-3	0
Elk Point	{ Maximum 40	42	54	75	77	80	93	91	84	72	57	42
	{ Minimum ..	-48	-27	-11	13	30	23	30	9	-2	-13	-10
Endiang	{ Maximum 44	40	..	..	..	..	..	..	..	..	..	..
	{ Minimum ..	-37	-36	..	..	..	..	..	..	..	..	..
Itakirk	{ Maximum 44	45	60	73	78	90	94	92	78	69	53	45
	{ Minimum ..	-36	-26	-2	17	28	28	29	34	4	4	-9
Hardisty	{ Maximum 48	45	66	75	80	89	93	95	83	..	..	..
	{ Minimum ..	-44	-38	-6	20	31	26	33	16	..	..	..
Nordegg	{ Maximum 54	46	58	66	72	78	..	84	80	66	50	46
	{ Minimum ..	-46	-37	-36	-14	21	23	22	22	4	-6	-26
Ranfurly	{ Maximum 48	42	57	74	80	89	90	93	85	72	58	43
	{ Minimum ..	-48	-37	-12	18	31	25	36	20	1	-6	-11
Rocky Mountain	{ Maximum 55	57	67	73	77	89	89	86	79	73	51	52
	{ Minimum ..	-51	-40	-7	17	22	25	26	23	8	-9	-26
Sedgewick	{ Maximum ..	43	66	72	73	89	93	94	83	80	55	45
	{ Minimum ..	-27	-36	0	18	30	25	37	19	5	-7	-3
Sion	{ Maximum 44	44	50	76	74	80	90	82	76	68	53	42
	{ Minimum ..	-48	-41	-7	15	26	24	31	18	4	-12	-27
Vermilion	{ Maximum 40	42	61	75	75	80	..	93	..	..	55	..
	{ Minimum ..	-48	-25	8	20	32	..	28	..	..	7	..
Wadena	{ Maximum 39	66	73	80	80	92	..	..	..	74	57	45
	{ Minimum ..	-43	-32	-3	15	25	..	..	..	3	-8	-14

TEMPERATURE FOR 1918—(Continued).

STATION		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Wetokwin	{ Maximum	45	50	60	70	79	86	90	81	78	70	60	55
	{ Minimum	-40	-35	-12	0	20	31	20	33	26	10	6	-5
RED DEER RIVER													
Cox	{ Maximum	48	53	66	75	83	90	95	95	87	74	59	46
	{ Minimum	-47	-45	-39	-4	18	32	33	34	28	11	-3	-10
Cox	{ Maximum	44	46	..	74	84	94	97	92	..	73	56	45
	{ Minimum	-32	-34	..	14	20	30	34	38	..	6	2	-20
Della	{ Maximum	..	..	62	79	78	..	..	..	..	..	..	..
	{ Minimum	..	..	-30	-6	20	..	..	..	..	..	..	..
Dick-bury	{ Maximum	50	50	68	70	80	86	92	92	80	74	58	46
	{ Minimum	30	-26	-24	0	24	26	30	36	28	10	10	-2
Harmattan	{ Maximum	..	53	65	70	75	..	..	..	..	73	57	47
	{ Minimum	..	-41	-36	-1	20	..	..	..	..	7	1	-14
Hill-down	{ Maximum	51	50	66	71	80	86	89	91	77	72	56	47
	{ Minimum	-38	38	-28	3	20	31	32	33	26	10	1	-5
Jenner	{ Maximum	..	..	..	..	83	95	97	96	84	80	58	49
	{ Minimum	-39	41	-21	12	21	32	35	36	23	8	-4	-21
Lacombe (Exper. Farm)	{ Maximum	47	48	64	72	79	86	93	90	84	76	56	46
	{ Minimum	-44	-42	-36	4	19	26	33	33	25	10	5	-8
Olds	{ Maximum	53	50	59	70	76	84	91	90	79	72	57	..
	{ Minimum	-30	-32	-23	5	22	30	28	30	25	9	4	..
Red Deer	{ Maximum	46	51	64	70	78	86	91	89	79	74	66	47
	{ Minimum	-45	-43	-32	4	20	33	35	34	28	10	2	-8
Springdale	{ Maximum	44	48	56	70	78	..	88	85	76	72	56	44
	{ Minimum	-55	-53	-20	-12	16	..	29	28	20	9	-9	-26
THE BOW RIVER													
Bassano	{ Maximum	54	50	66	76	81	92	97	96	83	72	50	40
	{ Minimum	-32	-28	-14	5	..	26	33	37	25	5	-4	-13
Brooks	{ Maximum	44	48	..	75	85	95	104	100	91	78	65	50
	{ Minimum	-40	-43	..	2	20	29	37	38	27	9	-1	-15

TEMPERATURE FOR 1918—(Continued).

STATION	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Brooks (2)	{ Maximum Minimum	{	{	{ 81 20	{ 81 22	{ 92 30	{ 96 37	{ 93 38	{ 82 37	{ 75 10	{	{
Calgary	{ Maximum Minimum	{ 55 -24	{ 66 -20	{ 76 20	{ 78 23	{ 90 31	{ 94 32	{ 93 34	{ 84 30	{ 74 16	{ 69 7	{ 52 -4
Claresholm	{ Maximum Minimum	{ 59 -32	{ 64 -24	{ 75 7	{ 75 15	{ 89 26	{ 94 28	{ 93 32	{ 79 29	{ 72 20	{ 60 6	{ 50 -8
Expans Coulee	{ Maximum Minimum	{ 54 -45	{ 66 -12	{ 80 11	{ 84 16	{ 95 26	{ 99 35	{ 98 35	{ 87 22	{ 80 7	{ 68 -5	{ 55 -25
Gem ..	{ Maximum Minimum	{ 82 -31	{ 91 -28	{ 74 5	{ 88 26	{ 78 23	{ 64 28	{ 44 46	{ 49 44	{ 77 4	{ 60 -5	{ 50 -12
Gleichen	{ Maximum Minimum	{ 48 -35	{ 64 -18	{ 77 4	{ 80 22	{ 91 31	{ 97 33	{ 100 37	{ 84 29	{ 71 3	{ 60 2	{ 50 -9
Lethbridge (Exper. Farm)	{ Maximum Minimum	{ 60 31	{ 54 41	{ 68 10	{ 77 6	{ 90 21	{ 94 21	{ 93 33	{ 83 28	{ 78 11	{ 59 2	{ 53 -11
Macleod	{ Maximum Minimum	{ 57 32	{ 54 41	{ 69 10	{ 65 6	{ 91 21	{ 99 33	{ 95 36	{ 86 31	{ 74 17	{ 58 1	{ 51 -4
Medicine Hat	{ Maximum Minimum	{ 48 -42	{ 46 -44	{ 68 9	{ 80 13	{ 98 35	{ 98 42	{ 96 35	{ 87 28	{ 80 13	{ 61 -4	{ 58 -18
Milk River	{ Maximum Minimum	{	{ 51 -32	{ 64 -12	{ 76 3	{	{	{	{	{	{	{
Minda (Manyberries Ranch)	{ Maximum Minimum	{ 46 -43	{	{ 60 16	{	{	{	{	{	{	{	{
Okotoks	{ Maximum Minimum	{ 56 25	{ 64 21	{ 71 4	{ 76 24	{ 85 32	{ 98 32	{ 89 34	{ 76 29	{ 69 14	{ 57 4	{ 47 -6
Pekisko	{ Maximum Minimum	{ 68 -41	{ 49 -39	{ 60 32	{ 65 -14	{ 81 22	{ 86 26	{ 90 28	{ 78 20	{ 65 12	{ 54 -6	{ 54 -45
Pincher Creek	{ Maximum Minimum	{ 57 -25	{ 48 -31	{ 62 18	{ 73 -2	{ 85 20	{ 90 31	{ 86 32	{ 77 29	{ 68 20	{ 49 7	{ 47 -3
Ronolane	{ Maximum Minimum	{ 50 -46	{ 50 -46	{ 66 13	{ 83 5	{ 96 19	{ 98 37	{ 95 38	{ 88 26	{ 81 7	{ 65 -4	{ 54 -16
Strathmore	{ Maximum Minimum	{	{ 50 -46	{ 63 -1	{ 74 4	{ 79 ..	{ 37 ..	{ 38 ..	{ 80 28	{ 72 11	{ 58 4	{ 47 -9

TEMPERATURE FOR 1918--(Continued).

STATION	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Suffield	{ Maximum -44	{ Maximum -43	{ Maximum -15	{ Maximum 73	{ Maximum 83	{ Maximum 97	{ Maximum 97	{ Maximum 95	{ Maximum 87	{ Maximum 77	{ Maximum 58	{ Maximum 48
	{ Minimum -56	{ Minimum -52	{ Minimum -40	{ Minimum 71	{ Minimum 73	{ Minimum 86	{ Minimum 90	{ Minimum 83	{ Minimum 76	{ Minimum 74	{ Minimum 56	{ Minimum -20
Twin Lakes	{ Maximum -25	{ Maximum -29	{ Maximum -16	{ Maximum 5	{ Maximum 15	{ Maximum 21	{ Maximum 31	{ Maximum 31	{ Maximum 29	{ Maximum 16	{ Maximum 8	{ Maximum -11
ROCKY MOUNTAINS												
Banff	{ Maximum -48	{ Maximum -37	{ Maximum -31	{ Maximum 67	{ Maximum 69	{ Maximum 82	{ Maximum 91	{ Maximum 87	{ Maximum 78	{ Maximum 63	{ Maximum 43	{ Maximum 38
	{ Minimum -40	{ Minimum -37	{ Minimum -31	{ Minimum 2	{ Minimum 21	{ Minimum 26	{ Minimum 32	{ Minimum 32	{ Minimum 28	{ Minimum 19	{ Minimum -2	{ Minimum -15
ATHABASCA RIVER DISTRICT												
Athabasca Landing	{ Maximum -42	{ Maximum -49	{ Maximum -58	{ Maximum 69	{ Maximum 75	{ Maximum 82	{ Maximum 89	{ Maximum 81	{ Maximum 82	{ Maximum 71	{ Maximum 59	{ Maximum 42
	{ Minimum -52	{ Minimum -47	{ Minimum -40	{ Minimum 10	{ Minimum 16	{ Minimum 19	{ Minimum 25	{ Minimum 36	{ Minimum 24	{ Minimum 1	{ Minimum -13	{ Minimum -10
Edson	{ Maximum -49	{ Maximum -46	{ Maximum -63	{ Maximum 72	{ Maximum 74	{ Maximum 82	{ Maximum 91	{ Maximum 87	{ Maximum 87	{ Maximum 69	{ Maximum 57	{ Maximum 43
	{ Minimum -41	{ Minimum -42	{ Minimum -34	{ Minimum 6	{ Minimum 20	{ Minimum 21	{ Minimum 25	{ Minimum 25	{ Minimum 25	{ Minimum 5	{ Minimum -16	{ Minimum -27
Entrance	{ Maximum -72	{ Maximum -61	{ Maximum -55	{ Maximum 70	{ Maximum 70	{ Maximum 85	{ Maximum 93	{ Maximum 87	{ Maximum 84	{ Maximum 71	{ Maximum 55	{ Maximum 48
	{ Minimum -43	{ Minimum -37	{ Minimum -30	{ Minimum -2	{ Minimum 22	{ Minimum 28	{ Minimum 30	{ Minimum 31	{ Minimum 28	{ Minimum 15	{ Minimum 0	{ Minimum -20
Jasper	{ Maximum -47	{ Maximum -41	{ Maximum ..	{ Maximum 60	{ Maximum 72	{ Maximum 85	{ Maximum 92	{ Maximum 83	{ Maximum 85	{ Maximum 69	{ Maximum 44	{ Maximum ..
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	{ Minimum -37	{ Minimum -37	{ Minimum -20	{ Minimum 3	{ Minimum 21	{ Minimum 31	{ Minimum 32	{ Minimum 40	{ Minimum 30	{ Minimum 1	{ Minimum -2	{ Minimum -19
Wabasca	{ Maximum -36	{ Maximum -47	{ Maximum -62	{ Maximum 74	{ Maximum 82	{ Maximum 81	{ Maximum 86	{ Maximum 85	{ Maximum 85	{ Maximum 75	{ Maximum 52	{ Maximum 42
	{ Minimum -47	{ Minimum -40	{ Minimum -35	{ Minimum -8	{ Minimum 22	{ Minimum 30	{ Minimum 29	{ Minimum 39	{ Minimum 28	{ Minimum 14	{ Minimum -9	{ Minimum -17
PEACE RIVER DIST.												
Dunvegan	{ Maximum -48	{ Maximum -47	{ Maximum -54	{ Maximum 72	{ Maximum 79	{ Maximum 79	{ Maximum ..	{ Maximum ..	{ Maximum ..	{ Maximum ..	{ Maximum ..	{ Maximum ..
	{ Minimum -55	{ Minimum -46	{ Minimum -38	{ Minimum 11	{ Minimum 19	{ Minimum ..	{ Minimum ..	{ Minimum ..	{ Minimum ..	{ Minimum ..	{ Minimum ..	{ Minimum ..
Fort Vermilion	{ Maximum -13	{ Maximum -41	{ Maximum -44	{ Maximum 59	{ Maximum 69	{ Maximum 81	{ Maximum 89	{ Maximum 84	{ Maximum 79	{ Maximum 66	{ Maximum 46	{ Maximum 37
	{ Minimum -65	{ Minimum -66	{ Minimum -48	{ Minimum -12	{ Minimum 11	{ Minimum 16	{ Minimum 20	{ Minimum 33	{ Minimum 14	{ Minimum -16	{ Minimum -24	{ Minimum -40
Grande Prairie	{ Maximum -44	{ Maximum -43	{ Maximum -48	{ Maximum 65	{ Maximum 76	{ Maximum 78	{ Maximum ..	{ Maximum ..	{ Maximum 82	{ Maximum ..	{ Maximum 54	{ Maximum 43
	{ Minimum -36	{ Minimum -34	{ Minimum -27	{ Minimum 3	{ Minimum 22	{ Minimum 30	{ Minimum ..	{ Minimum ..	{ Minimum 28	{ Minimum ..	{ Minimum -1	{ Minimum -17
Peace River Crossing	{ Maximum -43	{ Maximum -53	{ Maximum -61	{ Maximum 81	{ Maximum 87	{ Maximum 90	{ Maximum 89	{ Maximum 87	{ Maximum 83	{ Maximum 75	{ Maximum 54	{ Maximum 44
	{ Minimum -54	{ Minimum -47	{ Minimum -32	{ Minimum 7	{ Minimum 21	{ Minimum 31	{ Minimum 30	{ Minimum 40	{ Minimum 21	{ Minimum 3	{ Minimum 5	{ Minimum -21

SUMMARY OF THE ACREAGE AND YIELDS OF THE LEADING GRAINS
DURING THE LAST TEN YEARS.

	Year	Crop Area in Acres	Total Yield in Bushels	Yield per Acre	Average Yield
Spring Wheat	1918	3,848,424	23,090,544	6 bu.	18.09
	1917	2,622,853	51,805,839	19.00	
	1916	1,549,075	41,163,471	24.18	
	1915	1,637,122	58,830,704	35.93	
	1914	989,561	15,102,083	15.26	
	1913	1,043,114	20,360,104	19.51	
	1912	957,874	17,434,774	18.29	
	1911	757,493	15,730,238	20.75	
	1910	450,493	5,697,956	12.85	
	1909	324,472	6,155,455	18.97	
Winter Wheat	1918	44,065	660,975	15.00	20.2
	1917	51,704	1,023,173	20.00	
	1916	18,663	447,475	23.89	
	1915	31,954	1,257,985	39.37	
	1914	49,930	837,204	16.77	
	1913	83,719	1,250,129	14.92	
	1912	120,811	2,395,875	19.83	
	1911	182,671	4,336,749	23.74	
	1910	142,467	2,206,564	15.48	
	1909	102,167	2,312,344	22.63	
Oats	1918	2,651,548	60,322,717	22.75	36.23
	1917	2,667,291	85,726,170	32.14	
	1916	1,394,927	60,798,239	43.78	
	1915	1,570,596	90,582,694	57.66	
	1914	1,147,382	34,597,117	30.15	
	1913	1,221,450	44,078,325	36.09	
	1912	971,969	37,085,234	38.15	
	1911	669,827	27,604,993	41.21	
	1910	492,589	12,158,530	24.68	
	1909	693,901	24,819,661	35.76	
Barley	1918	470,073	7,756,204	16.50	25.96
	1917	462,726	9,984,789	22.56	
	1916	297,967	8,477,232	28.64	
	1915	374,062	12,761,187	34.11	
	1914	340,992	7,847,640	23.01	
	1913	333,462	8,645,812	25.92	
	1912	225,055	6,287,112	27.94	
	1911	103,302	3,037,584	29.41	
	1910	90,901	1,899,509	20.79	
	1909	107,764	3,310,332	30.72	
Flax	1918	95,920	479,600	5.00	8.33
	1917	139,527	777,690	5.6	
	1916	43,361	574,700	12.43	
	1915	41,243	569,762	13.57	
	1914	41,656	207,115	4.97	
	1913	96,445	799,653	8.29	
	1912	112,776	1,196,416	10.60	
	1911	16,549	153,908	9.30	
	1910	15,271	46,155	3.02	
	1909	12,479	131,531	10.54	

SUMMARY OF THE ACREAGE AND YIELDS OF THE LEADING GRAINS
DURING THE LAST TEN YEARS—(Continued).

	Year	Crop Area in Acres	Total Yield in Bushels	Yield per Acre	Average Yield
Rye	1918	47,877	825,878	17.50	20.42
	1917	29,997	764,828	26.00	
	1916	10,134	212,503	23.25	
	1915	12,067	291,399	24.14	
	1914	14,623	261,843	17.90	
	1913	17,452	370,661	21.24	
	1912	2,493	54,119	21.70	
	1911	2,190	38,722	17.68	
	1910	1,522	28,306	18.60	
	1909	1,592	25,801	16.20	
Mixed Grains	1918	27,989	139,945	5.00	
	1917	49,000	490,000	10.00	
Hay	1918	492,522	492,522 tons		
	1917	469,000	234,500 tons		

	Total Crop Area	Total Yield of Grain
1918	7,727,792	93,275,863
1917	5,974,098	150,082,489
1916	3,821,476	111,735,729
1915	3,668,238	164,332,483
1914	2,586,169	58,895,709
1913	2,799,267	75,575,682
1912	2,391,752	64,465,058
1911	1,732,648	50,907,531
1910	1,193,261	22,027,184
1909	1,242,644	36,761,493

CROP STATISTICS.
SPRING WHEAT.

No.	Crop District	Year	Bushels	Acreage	Yield per Acre
1	Medicine Hat	1917	1,947,843	99,777	20.00
		1918	219,507	73,401	2.99
2	Warner	1917	1,274,364	77,567	17.05
		1918	73,076	17,472	4.18
3	Cardston	1917	2,132,820	115,011	19.00
		1918	213,762	19,796	10.80
4	Pincher Creek	1917	115,380	6,552	18.02
		1918	43,008	6,302	6.82
5	Macleod	1917	807,471	46,449	18.00
		1918	380,439	34,066	11.16
6	Claresholm	1917	2,462,805	90,891	27.03
		1918	1,110,025	78,379	14.16
7	Nanton	1917	209,232	8,559	25.00
		1918	449,163	41,367	10.85
8	Little Bow	1917	3,145,608	141,624	22.05
		1918	1,381,282	141,462	9.76
9	Taber	1917	3,518,748	172,697	20.00
		1918	782,609	114,492	6.83
10	Redcliff	1917	1,004,382	61,376	17.01
		1918	227,363	71,235	3.19
11	Bow Valley	1917	1,786,356	80,046	22.00
		1918	532,394	60,918	8.73
12	Gleichen	1917	1,978,218	83,988	23.04
		1918	814,509	78,360	10.39
13	High River	1917	2,330,055	97,011	24.02
		1918	686,088	63,942	10.72
14	Okotoks	1917	1,114,308	44,730	25.00
		1918	396,100	36,102	10.96
15	Rocky Mountain	1917	41,310	2,847	15.01
		1918	10,120	2,370	4.26
16	Calgary	1917	.....	.....	.....
		1918	36,750	3,399	10.81
17	Cochrane	1917	58,626	3,897	15.03
		1918	28,038	2,852	9.83
18	Didsbury	1917	7,434,270	27,441	28.12
		1918	306,030	33,338	9.18
19	Hand Hills	1917	3,712,131	241,425	15.00
		1918	1,064,515	201,550	5.28
20	Acadia	1917	1,477,791	82,436	18.00
		1918	719,455	133,418	5.39
21	Coronation	1917	1,144,284	97,243	15.00
		1918	260,370	99,030	2.63
22	Stettler	1917	1,873,764	107,676	17.05
		1918	883,780	108,410	8.15
23	Olds	1917	5,781,870	283,050	20.50
		1918	1,484,110	163,660	9.06
24	Innisfail	1917	242,964	11,034	22.00
		1918	125,484	8,526	14.71
25	Red Deer	1917	93,573	4,158	23.02
		1918	88,344	4,498	19.64
26	Lacombe	1917	255,834	14,673	18.00
		1918	272,310	14,881	18.29
27	Ponoka	1917	329,742	16,830	20.06
		1918	188,011	11,179	16.81
28	Wetaskiwin	1917	220,644	10,683	21.00
		1918	41,100	4,498	9.13
29	Camrose	1917	765,144	33,984	23.00
		1918	199,896	33,126	6.01
30	Sedgewick	1917	1,490,040	82,935	18.00
		1918	177,118	37,366	4.74

SPRING WHEAT—(Continued).

No.	Crop District	Year	Bushels	Acreage	Yield per Acre
31	Ribstone	1917	1,257,831	70,617	18.00
		1918	193,663	70,526	2.76
32	Wainwright	1917	859,590	46,062	19.00
		1918	97,226	26,438	3.67
33	Alexandra	1917	520,911	27,795	19.00
		1918	199,546	19,180	10.40
34	Vermilion	1917	687,735	45,693	15.00
		1918	91,764	16,838	5.44
35	Vegreville	1917	586,710	36,153	16.00
		1918	91,064	16,684	5.45
36	South Edmonton	1917	135,306	5,130	26.52
		1918	128,399	8,988	14.28
37	Leduc	1917	263,142	13,419	20.00
		1918	87,816	9,448	9.29
38	Stony Plain	1917	287,937	15,174	19.00
		1918	93,022	11,092	8.38
39	Lac Ste. Anne	1917	126,540	7,344	17.00
		1918	39,568	3,398	11.64
40	Edson	1917	.....	.....	.....
		1918	228	40	5.70
41	Pembina	1917	252,018	11,592	22.00
		1918	103,684	9,790	10.59
42	St. Albert	1917	180,765	7,299	25.00
		1918	75,146	6,936	10.83
43	Sturgeon	1917	813,816	21,258	34.03
		1918	102,879	10,251	10.03
44	Victoria	1917	823,446	41,949	19.00
		1918	198,815	23,320	8.52
45	Whitford	1917	681,183	19,899	34.00
		1918	60,178	11,162	5.39
46	Beaver River	1917	444,627	24,363	18.04
		1918	132,470	16,020	8.26
47	St. Paul	1917	182,205	10,692	17.50
		1918	39,838	5,270	7.56
48	Clearwater	1917	.....	.....	.....
		1918	5,685	415	13.70
49	Athabasca	1917	380,430	20,070	19.00
		1918	45,660	6,830	6.68
50	Grouard	1917	32,058	1,996	16.02
		1918	18,104	1,624	11.14
51	Peace River	1917	930,855	50,058	18.50
		1918	260,649	19,362	13.46
52	Lethbridge	1917	.....	.....	.....
		1918	51,204	7,260	7.05
				2,000,267	

WINTER WHEAT.

No.	Crop District	Year	Bushels	Acreage	Yield per Acre
1	Medicine Hat	1917	53,361	2,601	21.00
		1918	6,235	1,055	5.91
2	Warner	1917	22,878	1,116	20.50
		1918	11,700	1,300	9.00
3	Cardston	1917	58,149	3,132	19.00
		1918	18,405	1,425	12.91
4	Pincher Creek	1917	47,709	2,187	22.00
		1918	30,068	2,650	11.31
5	Macleod	1917	3,870	189	20.50
		1918	1,000	100	10.00
6	Clareholm	1917	105,165	5,130	20.50
		1918	4,500	500	9.00
7	Nanton	1917	3,870	189	21.00
		1918	2,100	160	13.12
8	Little Bow	1917	100	10	10.00
		1918	32,472	1,584	21.00
9	Taber	1917	500	50	10.00
		1918	51,840	2,529	21.09
10	Redcliff	1917	300	30	10.00
		1918	184	9	20.50
11	Bow Valley	1917	100	10	10.00
		1918	20,475	999	21.15
12	Gleichen	1917	4,130	425	9.72
		1918	2,214	108	20.50
13	High River	1917	460	20	23.00
		1918	549	27	20.05
14	Okotoks	1917	1,296	70	18.51
		1918	24,840	2,754	9.54
15	Rocky Mountain	1917	28,759	2,613	11.00
		1918	500	50	10.00
16	Calgary	1917	750	100	7.50
		1918	1,287	63	20.50
17	Cochrane	1917	1,603	103	15.56
		1918	108,117	5,274	20.50
18	Didsbury	1917	1,000	100	10.00
		1918	60,147	2,934	20.00
19	Acadia	1917	6,832	1,046	6.53
		1918	165,861	8,091	21.00
20	Coronation	1917	11,769	7,389	1.59
		1918	20,664	1,008	20.50
21	Stettler	1917	17,500	500	15.00
		1918	7,380	360	20.50
22	Olds	1917	9,580	918	10.43
		1918	3,213	288	11.25
23	Innisfail	1917	510	40	12.75
		1918	2,520	63	40.00
24	Red Deer	1917	960	80	12.00
		1918	4,977	243	21.00
25	Lacombe	1917	1,140	50	22.80
		1918	3,132	153	20.50
26	Ponoka	1917	770	150	5.13
		1918	2,214	108	20.50
27	Wetaskiwin	1917	1,000	100	10.00
		1918	22,878	1,116	20.50
28	Camrose	1917	530	100	5.30
		1918	27,486	1,341	21.00
29	Sedgewick	1917	6,520	510	12.79
		1918			

DEPARTMENT OF AGRICULTURE

WINTER WHEAT—(Continued).

No.	Crop District	Year	Bushels	Acreage	Yield per Acre
31	Ribstone	1917	2,214	108	20.50
		1918	4,798	2,228	2.15
32	Wainwright	1917	8,118	396	20.50
		1918	1,000	100	10.00
33	Alexandra	1917	549	27	20.01
		1918	100	10	10.00
34	Vermilion	1917	16,605	810	20.50
		1918	1,000	100	10.00
35	Vegreville	1917	16,236	792	20.50
		1918	1,000	100	10.00
36	South Edmonton	1917	549	27	20.05
		1918	100	10	10.00
37	Leduc	1917	1,107	54	20.50
		1918	583	96	6.07
38	Stony Plain	1917	6,453	315	21.00
		1918	1,000	100	10.00
39	Edson	1917	.....	.....	.....
		1918	.....	.....	.....
40	Lac Ste. Anne	1917	2,025	99	20.50
		1918	1,408	87	16.16
41	Pembina	1917	2,394	117	20.50
		1918	1,500	100	15.00
42	St. Albert	1917	7,929	387	21.09
		1918	1,500	110	13.63
43	Sturgeon	1917	4,977	243	20.50
		1918	2,020	150	13.46
44	Victoria	1917	32,103	1,566	20.50
		1918	1,900	500	3.80
45	Whitford	1917	54,054	2,637	20.50
		1918	1,000	100	10.00
46	Beaver River	1917	2,952	144	20.50
		1918	500	50	10.00
47	St. Paul	1917	1,107	54	20.50
		1918	100	10	10.00
48	Clearwater	1917	.....	.....	.....
		1918	.....	.....	.....
49	Athabasca	1917	.....	.....	.....
		1918	.....	.....	.....
50	Grouard	1917	76	26	3.02
		1918	.....	.....	.....
51	Peace River	1917	6,273	306	18.50
		1918	500	50	10.00
52	Lethbridge	1917	.....	.....	.....
		1918	320	40	8.00
				25,595	

OATS.

No.	Crop District	Year	Bushels	Acreage	Yield per Acre
1	Medicine Hat	1917	16,312,860	479,790	34.15
		1918	52,641	9,159	5.74
2	Warner	1917	1,575,900	46,350	34.00
		1918	24,110	4,300	5.61
3	Cardston	1917	1,545,912	45,468	34.00
		1918	258,800	19,410	10.33
4	Pincher Creek	1917	179,532	6,489	28.15
		1918	66,810	5,748	11.62
5	Macleod	1917	337,068	12,798	26.00
		1918	113,445	7,695	14.74
6	Claresholm	1917	1,076,760	28,800	37.50
		1918	589,710	37,010	15.93
7	Nanton	1917	918,918	29,970	31.00
		1918	271,182	16,833	16.14
8	Little Bow	1917	747,054	30,357	25.00
		1918	233,928	15,360	15.24
9	Taber	1917	1,597,752	68,841	23.00
		1918	381,370	26,010	14.66
10	Redcliff	1917	1,954,116	57,474	34.00
		1918	158,730	28,020	5.66
11	Bow Valley	1917	765,513	28,116	27.00
		1918	298,299	12,300	24.25
12	Gleichen	1917	1,027,677	72,063	20.69
		1918	1,028,194	53,177	19.33
13	High River	1917	2,072,385	67,761	31.15
		1918	1,146,826	59,548	19.26
14	Okotoks	1917	3,418,407	92,673	37.00
		1918	743,596	35,906	20.71
15	Rocky Mountain	1917	477,054	14,031	34.00
		1918	105,730	7,550	14.00
16	Calgary	1917	.....	.....	.....
		1918	179,563	9,333	19.23
17	Cochrane	1917	1,200,969	27,297	44.25
		1918	567,975	23,529	24.12
18	Didsbury	1917	3,142,215	83,349	38.05
		1918	1,196,765	63,379	18.88
19	Hand Hills	1917	2,533,635	124,524	20.15
		1918	1,002,650	123,895	8.09
20	Acadia	1917	1,767,348	80,334	22.00
		1918	447,012	36,442	12.26
21	Coronation	1917	1,608,984	94,194	17.08
		1918	343,323	55,029	6.23
22	Stettler	1917	2,863,323	105,804	27.00
		1918	894,266	63,804	14.01
23	Olds	1917	1,928,592	61,974	31.00
		1918	820,106	42,502	19.29
24	Innisfail	1917	1,652,560	47,484	35.15
		1918	784,766	34,104	23.01
25	Red Deer	1917	742,491	22,761	32.05
		1918	623,614	21,388	29.15
26	Lacombe	1917	1,451,754	43,713	33.15
		1918	1,312,446	49,180	26.68
27	Ponoka	1917	1,203,462	37,602	32.00
		1918	770,955	29,532	26.11
28	Wetaskiwin	1917	1,242,513	37,611	33.24
		1918	580,347	31,056	18.68
29	Camrose	1917	2,568,744	117,018	22.02
		1918	1,797,614	108,692	16.53
30	Sedgewick	1917	3,349,134	99,459	34.24
		1918	1,264,554	78,666	16.07

OATS—(Continued).

No.	Crop District	Year	Bushels	Acreage	Yield per Acre
31	Ribstone	1917	1,214,046	52,308	23.22
		1918	295,011	48,201	6.12
32	Wainwright	1917	1,357,263	48,015	28.00
		1918	228,992	30,460	7.50
33	Alexandra	1917	2,089,197	88,083	24.00
		1918	1,058,127	45,930	23.03
34	Vermilion	1917	1,711,251	74,763	23.50
		1918	665,790	41,190	16.16
35	Vegreville	1917	1,786,294	86,571	21.25
		1918	1,579,622	72,038	21.92
36	South Edmonton	1917	340,038	13,788	25.05
		1918	624,985	18,571	33.77
37	Leduc	1917	767,835	32,778	23.50
		1918	590,466	29,414	20.07
38	Stony Plain	1917	1,105,047	33,804	33.15
		1918	680,258	24,854	27.30
39	Edson	1917	.....	.....	.....
		1918	12,100	700	17.28
40	Lac Ste. Anne	1917	672,381	26,703	25.00
		1918	610,734	22,084	27.65
41	Pembina	1917	1,081,647	32,310	34.95
		1918	842,402	31,934	26.44
42	St. Albert	1917	444,690	23,913	19.00
		1918	629,845	17,432	36.13
43	Sturgeon	1917	3,262,734	100,557	32.50
		1918	1,900,652	67,870	28.00
44	Victoria	1917	1,940,976	72,864	23.50
		1918	1,193,102	58,520	20.39
45	Whitford	1917	1,272,555	49,248	26.34
		1918	803,589	41,373	19.42
46	Beaver River	1917	2,111,706	62,109	20.50
		1918	737,100	37,225	19.80
47	St. Paul	1917	922,545	34,281	27.20
		1918	461,400	21,552	21.41
48	Clearwater	1917	.....	.....	.....
		1918	89,630	3,710	24.15
49	Athabasca	1917	278,766	9,837	28.50
		1918	130,566	6,608	19.76
50	Grouard	1917	621,207	8,181	76.00
		1918	277,190	8,570	32.34
51	Peace River	1917	1,783,359	53,073	34.00
		1918	982,744	26,503	37.03
52	Lethbridge	1917	.....	.....	.....
		1918	19,210	850	22.60
				1,764,346	

BARLEY.

No.	Crop District	Year	Bushels	Acreage	Yield per Acre
1	Medicine Hat	1917	98,010	4,455	22.00
		1918	3,212	700	4.58
2	Warner	1917	182,358	8,289	22.05
		1918	1,380	560	2.46
3	Cardston	1917	205,164	15,921	13.15
		1918	24,224	3,336	7.26
4	Pincher Creek	1917	19,006	1,188	20.02
		1918	20,408	1,760	11.59
5	Macleod	1917	19,620	1,224	16.25
		1918	6,408	640	10.01
6	Claresholm	1917	107,379	4,716	23.09
		1918	29,096	2,364	12.31
7	Nanton	1917	15,543	2,781	6.00
		1918	12,530	1,420	8.82
8	Little Bow	1917	46,080	2,340	20.00
		1918	16,940	1,260	13.44
9	Taber	1917	105,255	8,235	13.15
		1918	13,036	1,528	8.53
10	Redcliff	1917	140,580	6,390	22.50
		1918	3,560	1,504	2.36
11	Bow Valley	1917	27,045	2,088	13.00
		1918	21,652	1,372	15.81
12	Gleichen	1917	664,245	32,346	21.08
		1918	270,738	31,032	8.72
13	High River	1917	112,140	5,805	19.50
		1918	44,021	5,378	8.18
14	Okotoks	1917	413,055	18,108	23.29
		1918	169,924	14,792	11.48
15	Rocky Mountain	1917	66,132	3,006	22.25
		1918	5,796	420	13.80
16	Calgary	1917	.....	.....	.....
		1918	23,066	2,672	8.63
17	Cochrane	1917	288,630	10,494	28.21
		1918	192,056	12,836	14.96
18	Didsbury	1917	765,990	24,669	31.00
		1918	257,410	19,412	13.22
19	Hand Hills	1917	114,165	6,183	18.50
		1918	23,380	4,132	5.65
20	Acadia	1917	181,764	8,262	22.02
		1918	36,280	4,930	7.56
21	Coronation	1917	84,528	6,390	13.29
		1918	14,840	3,300	4.49
22	Stettler	1917	315,324	16,785	19.02
		1918	139,380	16,744	8.33
23	Olds	1917	192,870	8,163	24.38
		1918	100,012	6,786	14.73
24	Innisfail	1917	268,740	11,133	24.00
		1918	118,674	7,712	15.38
25	Red Deer	1917	136,701	4,833	28.00
		1918	64,620	2,954	21.87
26	Lacombe	1917	286,740	12,051	24.03
		1918	192,412	9,262	20.77
27	Ponoka	1917	279,882	11,961	23.09
		1918	142,569	7,971	17.88
28	Wetaskiwin	1917	264,546	11,808	22.40
		1918	107,444	8,440	12.73
29	Camrose	1917	320,463	16,794	19.00
		1918	78,730	7,698	10.22
30	Sedgewick	1917	201,366	10,404	19.28
		1918	88,560	9,960	8.90

DEPARTMENT OF AGRICULTURE

BARLEY—(Continued).

No.	Crop District	Year	Bushels	Acreage	Yield per Acre
31	Ribstone	1917	70,578	4,842	15.00
		1918	11,020	3,055	3.61
32	Wainwright	1917	51,318	4,149	12.15
		1918	9,160	3,280	2.79
33	Alexandra	1917	231,120	11,241	21.00
		1918	123,390	10,630	11.60
34	Vermilion	1917	153,612	10,584	14.50
		1918	80,680	9,500	8.49
35	Vegreville	1917	219,186	9,963	22.24
		1918	98,997	7,329	13.50
36	South Edmonton	1917	64,917	3,744	17.00
		1918	139,324	5,687	22.73
37	Leduc	1917	187,920	9,486	20.15
		1918	80,521	7,725	13.80
38	Stony Plain	1917	406,404	16,668	24.50
		1918	286,962	16,306	17.59
39	Edson	1917	.....	.....	.....
		1918	332	60	5.53
40	Lac Ste. Anne	1917	173,844	7,902	22.00
		1918	82,362	4,398	18.72
41	Pembina	1917	208,611	9,018	23.00
		1918	120,260	8,740	13.76
42	St. Albert	1917	239,769	8,271	29.05
		1918	158,676	7,374	21.52
43	Sturgeon	1917	733,437	29,529	25.25
		1918	225,550	11,578	19.48
44	Victoria	1917	627,462	28,521	22.00
		1918	197,420	16,928	11.66
45	Whitford	1917	332,838	15,129	22.24
		1918	130,484	8,664	15.05
46	Beaver River	1917	248,886	11,313	22.00
		1918	17,224	1,392	12.34
47	St. Paul	1917	91,584	4,311	21.50
		1918	23,420	1,404	10.63
48	Clearwater	1917	.....	.....	.....
		1918	3,896	244	15.97
49	Athabasca	1917	61,074	2,304	26.50
		1918	29,620	3,196	9.26
50	Grouard	1917	45,333	1,512	21.00
		1918	17,240	1,224	14.08
51	Peace River	1917	108,387	6,426	17.00
		1918	29,903	2,010	14.88
52	Lethbridge	1917	.....	.....	.....
		1918	1,000	100	10.00
				323,699	

RYE.

No.	Crop District	Year	Bushels	Acreage	Yield per Acre
1	Medicine Hat	1917	60,147	2,889	21.00
		1918	8,255	4,315	1.91
2	Warner	1917	11,853	1,215	10.05
		1918	7,295	1,580	4.61
3	Cardston	1917	.....	.....	.....
		1918	1,610	100	16.10
4	Pincher Creek	1917	3,600	90	40.00
		1918	995	94	11.05
5	Macleod	1917	3,132	153	21.00
		1918	1,000	100	10.00
6	Clareholm	1917	3,915	117	34.00
		1918	850	125	6.80
7	Nanton	1917	9,225	450	20.50
		1918	8,796	310	28.37
8	Little Bow	1917	6,300	2,520	3.00
		1918	12,680	1,620	8.23
9	Taber	1917	2,079	126	16.50
		1918	594	278	2.13
10	Redcliff	1917	14,625	1,107	13.00
		1918	2,860	1,170	2.67
11	Bow Valley	1917	16,110	3,438	15.00
		1918	1,000	100	10.00
12	Gleichen	1917	20,232	927	21.00
		1918	8,370	918	9.12
13	High River	1917	19,368	945	20.50
		1918	9,750	942	10.35
14	Okotoks	1917	18,630	1,125	17.29
		1918	19,200	1,064	18.04
15	Rocky Mountain	1917	.....	.....	.....
		1918	460	140	11.50
16	Calgary	1917	.....	.....	.....
		1918	1,269	64	19.82
17	Cochrane	1917	20,196	855	24.00
		1918	13,486	792	17.02
18	Didsbury	1917	28,701	1,161	25.00
		1918	20,056	1,173	17.09
19	Hand Hills	1917	17,712	864	20.50
		1918	3,657	900	4.06
20	Acadia	1917	6,129	837	7.00
		1918	2,416	678	3.56
21	Coronation	1917	13,653	666	20.50
		1918	2,838	750	3.79
22	Stettler	1917	10,872	621	17.04
		1918	4,380	910	4.81
23	Olds	1917	23,796	1,161	21.00
		1918	18,370	1,215	15.12
24	Innisfail	1917	7,983	333	24.05
		1918	4,226	262	16.13
25	Red Deer	1917	7,011	342	21.00
		1918	4,802	214	22.42
26	Lacombe	1917	20,664	1,008	20.50
		1918	26,036	1,370	19.00
27	Ponoka	1917	12,186	828	15.00
		1918	10,691	575	18.59
28	Wetaskiwin	1917	4,968	603	8.00
		1918	3,314	214	15.49
29	Camrose	1917	5,346	261	21.02
		1918	3,168	314	10.09
30	Sedgewick	1917	14,760	720	21.25
		1918	4,590	570	8.05

RYE—(Continued).

No.	Crop District	Year	Bushels	Acreage	Yield per Acre
31	Ribstone	1917	20,475	999	20.54
		1918	1,385	715	1.93
32	Wainwright	1917	6,615	954	7.36
		1918	2,050	640	3.20
33	Alexandra	1917	6,453	315	20.00
		1918	1,485	245	6.06
34	Vermilion	1917	3,600	117	31.00
		1918	1,265	160	7.90
35	Vegreville	1917	972	153	6.50
		1918	1,100	146	7.53
36	South Edmonton	1917	675	27	25.00
		1918	100	20	5.00
37	Leduc	1917	188	9	20.50
		1918	342	45	7.60
38	Stony Plain	1917	9,036	441	21.00
		1918	4,455	410	10.86
39	Edson	1917	.....	.....	.....
		1918	.....	.....	.....
40	Lac Ste. Anne	1917	6,822	333	21.20
		1918	4,270	375	11.38
41	Pembina	1917	5,715	279	21.22
		1918	3,320	310	10.71
42	St. Albert	1917	2,124	216	10.19
		1918	2,490	210	11.80
43	Sturgeon	1917	1,575	414	4.00
		1918	1,895	240	7.89
44	Victoria	1917	6,822	333	21.15
		1918	780	190	4.10
45	Whitford	1917	1,323	234	5.09
		1918	1,000	100	10.00
46	Beaver River	1917	2,178	108	20.00
		1918	160	20	8.00
47	St. Paul	1917	46,674	2,277	20.50
		1918	4,640	330	14.06
48	Clearwater	1917	.....	.....	.....
		1918	1,440	90	16.00
49	Athabasca	1917	2,574	234	8.00
		1918	1,455	105	13.85
50	Grouard	1917	5,166	252	20.50
		1918	1,000	100	10.00
51	Peace River	1917	450	72	6.50
		1918	690	60	11.50
52	Lethbridge	1917	.....	.....	.....
		1918	926	60	.....
				27,428	

FLAX.

No.	Crop District	Year	Bushels	Acreage	Yield per Acre
1	Medicine Hat	1917	77,184	20,583	4.00
		1918	15,510	12,430	1.22
2	Warner	1917	90,594	18,351	5.25
		1918	13,760	7,960	1.73
3	Cardston	1917	21,393	2,403	9.00
		1918	7,150	1,050	6.81
4	Pincher Creek	1917	.....	.....	.....
		1918	700	140	5.00
5	Macleod	1917	5,787	1,593	4.28
		1918	700	140	5.00
6	Claresholm	1917	26,010	1,728	15.00
		1918	6,172	1,612	3.83
7	Nanton	1917	6,111	873	7.14
		1918	3,545	600	5.91
8	Little Bow	1917	20,322	7,281	3.15
		1918	11,170	6,950	1.61
9	Taber	1917	167,418	27,657	7.00
		1918	18,850	4,950	3.08
10	Redcliff	1917	129,528	18,504	7.25
		1918	14,189	9,891	1.43
11	Bow Valley	1917	16,110	3,438	5.00
		1918	14,920	4,910	3.03
12	Gleichen	1917	23,301	3,051	8.24
		1918	13,048	2,562	5.09
13	High River	1917	22,932	3,276	7.00
		1918	11,150	2,210	5.04
14	Okotoks	1917	7,560	1,080	7.18
		1918	3,960	868	4.56
15	Rocky Mountain	1917	756	108	7.00
		1918	350	70	5.00
16	Calgary	1917	.....	.....	.....
		1918	1,008	525	1.92
17	Cochrane	1917	2,115	117	18.00
		1918	250	50	5.00
18	Didsbury	1917	6,804	972	7.25
		1918	700	140	5.00
19	Hand Hills	1917	41,724	7,902	6.09
		1918	15,920	5,510	2.88
20	Acadia	1917	33,534	10,998	3.46
		1918	16,247	3,716	4.37
21	Coronation	1917	23,121	3,303	7.28
		1918	4,130	2,506	1.65
22	Stettler	1917	3,843	549	7.34
		1918	2,439	517	4.71
23	Olds	1917	693	99	7.09
		1918	100	50	2.00
24	Innisfail	1917	1,008	144	7.00
		1918	700	140	5.00
25	Red Deer	1917	63	9	7.09
		1918	52	6	8.63
26	Lacombe	1917	8,883	1,269	7.00
		1918	1,610	170	9.47
27	Ponoka	1917	63	9	7.09
		1918	45	9	5.00
28	Wetaskiwin	1917	1,071	153	7.00
		1918	700	140	5.00
29	Camrose	1917	243	99	3.04
		1918	259	85	3.04
30	Sedgewick	1917	720	90	8.00
		1918	175	70	2.50

FLAX—(Continued).

No.	Crop District	Year	Bushels	Acreage	Yield per Acre
31	Ribstone	1917	8,064	710	12.50
		1918	1,474	690	2.13
32	Wainwright	1917	1,710	153	11.09
		1918	260	148	1.75
33	Alexandra	1917	2,331	333	7.00
		1918	700	140	5.00
34	Vermilion	1917	693	99	7.00
		1918	382	90	3.75
35	Vegreville	1917	2,259	108	21.00
		1918	987	126	7.83
36	South Edmonton	1917	252	35	7.00
		1918	125	25	5.00
37	Leduc	1917	1,701	243	7.00
		1918	700	140	5.00
38	Stony Plain	1917	1,260	180	7.00
		1918	700	140	5.00
39	Edson	1917	.....	.....	.....
		1918	.....	.....	.....
40	Lac Ste. Anne	1917	1,071	153	7.00
		1918	460	60	7.66
41	Pembina	1917	126	18	7.00
		1918	140	15	9.33
42	St. Albert	1917	117	18	6.50
		1918	25	5	5.00
43	Sturgeon	1917	2,331	333	7.00
		1918	1,160	140	8.28
44	Victoria	1917	3,402	486	7.00
		1918	500	100	5.00
45	Whitford	1917	567	36	16.00
		1918	50	10	5.00
46	Beaver River	1917	.....	.....	.....
		1918	40	10	4.00
47	St. Paul	1917	567	81	7.00
		1918	100	20	5.00
48	Clearwater	1917	.....	.....	.....
		1918	200	40	5.00
49	Athabasca	1917	3,951	513	11.00
		1918	700	140	5.00
50	Grouard	1917	189	27	7.00
		1918	135	25	5.29
51	Peace River	1917	4,257	558	8.04
		1918	1,513	159	9.51
52	Letellier	1917	.....	.....	.....
		1918	1,680	378	4.44
				72,578	

STATEMENT OF LIVE STOCK IN THE PROVINCE, 1918.

	Head.
Horses	791,246
Swine	601,534
Sheep	332,179
Dairy Cows	328,702
Calves	397,670
Steers	195,035
Other Cattle	730,949
Bulls	39,226
Total	3,416,541

HOMESTEAD ENTRIES.

During the year 2,140 homesteads, 15 pre-emptions, 6 purchased homestead entries and 431 soldier grants were made in Alberta, as follows:

	Home- steads	Pre- emptions	Soldier Grants	Purchased Homesteads
Lethbridge and Medicine Hat	149	5	73	..
Calgary and Red Deer	251	10	69	6
Edmonton	833	0	161	..
Peace River	374	0	64	..
Grande Prairie	533	0	64	..

FARM LABOUR.

Provincial Labour Bureaus were maintained during the year at Edmonton, Calgary, Lethbridge and Medicine Hat. Owing to the scarcity of farm labourers and to respond to the greater production campaign that was encouraged by the department, four special commissioners were sent to the United States to secure extra help. During March, April and May, 4,515 applications were filled by the bureaus.

Owing to the unsettled harvest conditions on account of frost and drought, it was very difficult to estimate what labour would be required. For sometime it was thought no outside help would be necessary but the crop conditions improved later in the season causing a keen demand for harvest help. A special representative was sent to Winnipeg to meet the eastern harvest excursions; also to Spokane, Washington and other points in the United States. From these sources sufficient outside help was secured to fill the demand. Wages ranged from \$65.00 to \$90.00 per month and \$2.50 to \$5.50 per day—board included.

As usual the railway companies granted special reduced rates of one cent per mile from the United States boundary points. Also one cent per mile at certain periods from Edmonton, Calgary, Lethbridge and Medicine Hat.

The situations filled by the Labour Bureaus totalled 7,391, divided as follows:

Edmonton	2,797
Calgary	3,183
Lethbridge	1,396
Medicine Hat	555
	<hr/> 7,930

IMMIGRATION.

The report of the Department of the Interior for the year ending March 31st, 1918, shows that Alberta received 16,281 immigrants, as against 12,418 in 1917 and 7,200 in 1916.

ALBERTA NATURAL HISTORY SOCIETY

JAS. McCAIG, ESQ.,
Chief Publicity Commissioner,
Dept. of Agriculture,
Edmonton.

DEAR SIR,—Please find with this, copies of the three missing reports, which are sent to you as requested, viz: The Executive Report for 1918; Entomological Report, by Mr. F. C. Whitehouse; The Secretary-treasurer's Report.

If you will please have them printed in the Annual Report of the Department, as heretofore.

Yours truly,
 R. E. FYSON,
Secretary-Treasurer.

ENTOMOLOGICAL REPORT, BY F. C. WHITEHOUSE.

Throughout the dry season of 1918 insect pests have been abnormally plentiful and in this, my fifth annual report, several new species must receive attention.

FIELD CROPS.

Cutworms this year gave farmers more trouble, and are responsible for greater crop loss in Central Alberta than for many years past. Wheat apparently proved to be largely immune from attack, but many fields of oats and barley were much thinned by cutworms, and many others had to be completely resown. Farmers state freely that the pest was most troublesome in crops on summerfallow and spring plowing—an admission equivalent to stating that the purposes of summerfallow are only partially understood, and the danger of a weedy overgrowth not yet realized. In wheat fields the usual volunteer heads of oats and barley were cleaned out by cutworms in many instances, leaving the threshed wheat unadulterated and therefore particularly suitable for seed.

Grain Aphids.—In my 1915 report mention was made of a wide-spread outbreak of aphid on oats throughout the Red Deer district, plentiful enough to clog the canvas on binders, but apparently arriving on the grain too late to damage the crops. Reports were received by me this harvest, particularly from around Sylvan Lake, of the recurrence of this pest, but again inconvenience from clogged binder canvases, due to the conglomerate mass of insects, rather than damage to crops, was the nature of the complaints.

GARDEN PESTS.

Cutworms.—The Red-backed cutworm (*Euxoa ochrogaster*) was extremely troublesome in gardens during 1918. Many farm gardens had to be completely resown, only to be eaten off a second and third time. Town gardens are usually smaller and can thus receive closer attention, but even in the case of town gardens considerable re-seeding was necessary.

Onion maggots cause loss in some gardens year by year, and the 1918 season was no exception. I have never had the maggots positively identified, but presume the species to be the Imported Onion Maggot (*Hyalemyia antiqua*).

Aphis.—The dry season was very favourable for aphid, or plant lice, as they are also called. Every tree, shrub and flower appeared to harbour its own colony, black, green, or yellow, as the case might be; and I would not even hazard a guess at the number of different species at work. The grass and undergrowth

beneath balsam poplar, Manitoba maple, etc., became black with the droppings of "honey dew." Under these conditions the appearance of predacious insects in large numbers, such as Lady-bird beetles and syrphus fly larvae, might have been expected, but such was not the case.

Spruce mite.—This pest appeared in Red Deer mid-summer, not only on the small transplanted spruce on boulevards and in gardens, but also on the native spruce in the parks. A number of the trees attacked are in a sorry state and it is questionable if they will survive. It was undoubtedly the continued drought that enabled this pest to establish itself and multiply unchecked. The remedy is copious applications of water from a hose, and spraying with lime sulphur solution summer strength, and advices to this effect were published in the local press.

The Alder Flea-beetle (*Haltica bimarginata*).—This small metallic beetle was first noticed by me in the fall, 1917, on willow in Gaetz Park, Red Deer, and this season the pest was present in ever-increasing numbers. During the day the beetles are distributed over the willows feeding, but in the evening assemble into masses on the higher branches. In 1913 the Division of Entomology, Ottawa, published a circular, "Flea-beetles and Their Control," and where this circular discusses the Alder Flea-beetle the following statement appears: "Large numbers of the beetles were found feeding on willow, in 1898, at Red Deer, Alta."

The Forest Tent Caterpillar (*M. disstria*).—This pest was again in evidence throughout the district. The outbreak at Sylvan Lake, which has been under the observation of the Dominion Entomological Department for the past two years, is gradually subsiding. It will, however, undoubtedly recur in serious intensity from time to time.

By the courtesy of Mr. Arthur Gibson, Chief Assistant Entomologist, Ottawa, I am able to include additional notes covering insect pest outbreaks for the year at other points within the Province:

Western Wheat-Stem Sawfly.—Wheat-stems showing the work of this insect were received at Ottawa from Howie, Alta. A number of complaints of injury were received from the Province of Saskatchewan.

Sugar-Beet Webworm.—An unusual outbreak of this insect took place in 1918 in the Prairie Provinces. In some localities large numbers of larvae were present, and in gardens caused much damage to such crops as cabbage, beets, peas, etc. The outbreak was chiefly in the Province of Saskatchewan, but gardens in Alberta were also visited by the caterpillars. In fields which were traversed by the larvae, the Russian Thistle was their favourite food plant.

Red-Turnip Beetle.—From the northern part of the Province of Alberta complaints were received of serious injury by this insect to cauliflowers, cabbages, turnips and radishes. It is more or less troublesome every year.

Western Blister Beetle.—This conspicuous beetle was again troublesome in the Province; the chief complaints of injury referring to damage to the foliage of caraganas.

The dry June of 1918 was particularly favourable for the number of rare and beautiful butterflies and dragonflies that are on the wing in that month. Around Red Deer I noted three species of black and yellow swallowtail butterflies viz. *Papilio nitra*; *P. zelicaon* and *P. bairdi*, the first and last of which are very rare insects. I also observed three species of dragonflies of the genus *Soma-tochlora*, viz. *franklini*, minor, and *cinctulata*, and a small damselfly new to Alberta *Enallagma hageni*.

EXECUTIVE REPORT FOR 1918.

Owing to the ban very rightly placed upon public gatherings in view of the influenza epidemic, it was necessary to postpone this, the society's annual meeting, a matter of four weeks.

During the past summer season the activities of our members have been conducted, as for the previous three years, beneath the shadow of war. While happily our own country has been free from actual conflict, the requirements of the times have demanded the tireless energy of all good citizens, and especially the women, in charitable work, leaving but little leisure for such peaceful pursuits as scientific study. In spite, however, of all difficulties throughout these trying times, our scheduled monthly and annual meetings have been regularly held, and the work of the society faithfully performed.

With deep gratitude the victorious conclusion of the world war may now be recorded in our annals, and it is now to be hoped that leisure and inclination for natural history study will not be found wanting.

In March last the society published "The Dragonflies (Odonata) of Alberta," written by Mr. Whitehouse. The paper is illustrated with two plates, and its aim is to provide a simple text book for the study of this interesting group of insects.

The publication is reviewed by the Editor of The Canadian Entomologist, Prof. E. M. Walker, of the University of Toronto, in the November number, who stated in part:

"We welcome this first entomological contribution from the Alberta Natural History Society, and hope that many more will be forthcoming. So little is known of the insects of Alberta that Mr. Whitehouse's work makes a valuable addition to our knowledge of the fauna of this Province."

With this encouragement the society will in the New Year consider the publication of a check list of the Macro-lepidoptera of Alberta, that has been prepared by our member Mr. K. Bowman, of Edmonton. This list is based upon Barnes and McDunnough's check list of the Lepidoptera of Boreal America, 1917, and will contain all records for the Province up to date, with data as to localities and period of flight. Butterflies and moths have always been a favourite study with natural history students, and the list should be of inestimable value.

We note with pleasure that a second paper by our former secretary, Mr. C. B. Horsbrugh, appeared in The Ibis for July, 1918, entitled: "Further Notes on Birds Observed at Alix, Buffalo Lake, and Red Deer in the Province of Alberta, Canada, in 1915 and 1916." Mr. Horsbrugh's former paper, "Ornithological Notes from the Alix and Buffalo Lake Districts, Province of Alberta, Canada, 1914," appeared in The Ibis for October, 1915, and was reprinted with our Annual Report for that year. For the past two years the author has been serving with the Canadian Army Medical Corps, B.E.F.

Members of our society have duly reported all captures of insects of special interest for the year for publication in the Chief Assistant Dominion Entomologist's "Entomological Record." They have also contributed specimens to both the Provincial and Dominion collections.

With the conclusion of the War our society anticipates with pleasure the return of Mr. F. H. Wolley Dod, of Midnapore, and Mr. Strickland, field officer, Dominion Entomological Laboratory, Lethbridge. Specialists such as these can ill be spared.

Throughout the summer months evidence was not lacking that the younger generation in Red Deer was taking no small interest in natural history study. For this desirable state of affairs full credit must be given to the High School and Public School teachers, who have undoubtedly worked with enthusiasm to accomplish this end. Hopeful of results, our society once more offered cash prizes for collections of insects and flowers to be exhibited at the Red Deer Agricultural Fair, but for some reason no exhibits were forthcoming. In all probability, however, the fair dates in July are unfavourable, as the school holidays are then on, and many pupils at Sylvan Lake, etc. Another year it would be well to offer the society's prizes for collections exhibited at the schools under the supervision of the teachers. Members of our society have been ever ready to assist school pupils in identifying their captures, and to give encouragement in every way.

In witness that our society has again kept in close touch with the situation respecting insects pest outbreaks throughout the Province, the usual entomological report follows.

Our appreciation is again expressed to the Provincial Government for assistance accorded. It must be the aim of our society to merit such support by a broader and more valuable field of activity year by year.

SECRETARY-TREASURER'S REPORT FOR THE YEAR ENDING NOVEMBER 30th, 1918.

During the year eight monthly meetings were held, with an average attendance of eight members. At these meetings the following papers were given:

Feb. 22—Prehistoric Reptiles, with reference to remains in the Red Deer Valley	Mr. E. Wilton
Mar. 22—Wild Fruits of Alberta	Mrs. H. George
May 31—Geological History	Mr. L. J. Williams

In addition to these, at the Annual Meeting in 1917, Mr. F. S. Carr, of Edmonton, gave a most interesting lecture on "Some Beetles of Alberta"; and Mr. F. C. Whitehouse gave also a most interesting paper on his trip to Nordegg in the summer for Dragonflies and Butterflies.

A field day was held on June 14th, an expedition being made to the Tamarack Swamp, west of Red Deer, where the members spent a pleasant afternoon in search of botanical and entomological specimens. The Coral Root orchid was found for the first time by Mrs. George.

Mr. Whitehouse reported a record for Alberta, a small blue dragonfly "Enallagma hageni." Also three new butterflies for Red Deer, "O jutta," "E. disa" and "B. frigga."

Two new members have joined the society this year: Mr. L. J. Williams, inspector of schools, and Mr. A. M. Munro, of Edmonton.

It was decided to suspend the monthly meeting during July and August, as was done last year.

Owing to the closing of all public gatherings on account of the outbreak of Spanish Influenza, the annual meeting of the society could not be held in November, as usual, but had to be postponed until the ban should be removed.

FINANCIAL STATEMENT.

Nov. 30TH, 1918.

RECEIPTS:		DISBURSEMENTS:	
1917 Dec. 1 Balance at Bank	\$201.57	Printing, etc.	\$ 9.00
1918 Members' Subscriptions.	3.50	Publishing pamphlet	54.00
		Plate for pamphlet	6.16
		Livery, etc.	9.25
		Secretary's salary	20.00
		Postage	1.75
		Balance	104.91
	<hr/>		<hr/>
	\$205.07		\$205.07

Audited Dec. 21st, 1918, by Mr. S. Pamely.

*APPENDIX TO THE REPORT OF
THE LIVE STOCK COMMISSIONER.*

		245	55	300	6,272	1,964	334	951	6,951	6,366	1,870	8,236
Brooks	N. Stafford											
Brooks	A. L. Young (Dep.)											
Bruderheim	W. T. Eggins (Dep.)											
Burdett	G. Lomas											
Brenner	F. E. Latham	49		49	86	103	7	21	161	189		189
Bruce	R. L. Summers	20		20	60	40			100	60	40	100
Bullockville	C. H. Bucknell				17	20	10		27	37		37
Cadogan	J. McCartney	46	9	55	157	115		15	257	28	244	272
Calgary	H. C. McMullen	3,926	1,573	5,499	30	95	7	1	117	118	7	125
Calgary	M. Sexsmith	3,175	848	4,023	45,871	37,410	5,742	222	77,317	42,750	40,531	83,281
Camrose	W. G. Duggan											
Camrose	C. S. Bailey (Dep.)	125		125	237	155	42	15	335	392		392
Cardiff	L. McLaughlin											
Cardston	R. A. Pilling											
Carmangay	F. Teskey	161	11	172	933	786	125	193	1,401	1,642	77	1,719
Carmangay	F. Waller											
Carvel	R. C. Howat	12		12	11	7	4		14	18		18
Carstairs	T. C. Lanctot	262	13	275	1,921	1,119	172	177	2,691	2,582	458	3,040
Carseland	C. Evans	91		91	24	33			57	57		57
Castor	Dr. A. A. Masker	78	12	90	754	149	7	28	868	863	40	903
Cayley	L. Beaton	267		267	4,563	4,139	77	4	8,621	6,039	2,613	8,702
Cereal	G. D. Osborne	29	26	55	191	126	11	18	288	267	50	317
Champion	W. A. Carmichael	171		171	388	353	47	46	648	741		741
Chauvin	A. E. Keith	102	28	130	637	418	2	14	1,039	395	600	1,055
Chicade	F. McLean											
Cherhill	W. J. Stromquist											
Chigwell	A. Burnett	19		19	9	7		16	87	107		107
Chinook	W. R. Hawkshaw	10		10				13	3	16		16
Chipman	A. Watson											
Clareholm	I. M. Workman											
Clive	A. C. Cameron	2	45	47	17,19	967	221	149	2,316	1,833	833	2,686
Clover Bar	D. Clark	5		5	6	14			20	20		20
Cochrane	Z. M. Mortimer	197	141	338	1,306	204	40	673	797	884	626	1,510
Compeer	W. H. McKee	30	9	39	129	55	10	1	173	35	119	184
Coleman	I. Plante	38	5	43	3	16		6	13	11	8	19
Colinton	N. Johnston	3		3	160	101		7	257	264		264
Consort	J. Wilkie	26	5	31	797	418		29	1,216	468	177	1,245
Coronation	E. J. Gibson	177	8	185	1,344	628	36	29	1,907	1,012	960	1,972

HORSE AND CATTLE SHIPMENTS (Continued).

Shipping Point	Inspector	HORSES			CATTLE							
		Local	Export	Total	Male	Female	Calves	Yearlings	Mature	Local	Export	Total
Catts	E. McNair	..	..	..	..	..	..	..	..	..	..	..
Chazy	G. Young	..	..	..	..	..	..	..	..	..	..	..
Croftsbach	L. Deanevorth	8	4	12	593	396	58	102	829	989	..	989
Croftsbach	A. W. Gordon	846	14	860	2,126	1,215	139	151	2,781	3,089	282	3,371
Czar	J. E. Langley	..	..	..	138	29	..	..	167	104	63	167
Carseland	M. Brown	..	..	..	..	..	..	..	..	..	..	..
Clyde	J. M. Salisbury	..	..	..	..	..	..	..	..	..	..	..
Cluny	D. Clark	164	..	164	573	459	126	67	839	444	588	1,032
Dalmead	J. H. Dixon	62	..	62	332	309	29	4	608	629	12	641
Darwell	A. B. Smith	2	..	2	5	..	..	..	5	5	..	..
Day-land	J. Berry	..	..	..	..	..	..	..	..	..	..	..
Delburne	A. E. Kent	52	38	90	997	116	133	46	1,204	1,651	332	1,983
Delia	J. L. Carter	..	..	..	..	..	..	..	..	..	..	..
DeWinton	J. McNeill	35	..	35	155	100	10	10	235	255	..	255
Didsbury	W. F. Sick	353	83	436	2,623	1,837	325	407	3,728	4,406	54	4,460
Dinant	W. R. Porter	21	..	21	66	49	6	18	91	115	..	115
Donalda	O. M. Vikse	44	4	48	697	597	..	2	1,202	850	351	1,201
Dorence	A. A. McDonald	5	..	5	199	166	125	36	204	365	..	365
Drumteller	J. A. Sutherland	11	..	11	..	..	..	..	..	..	..	..
Duffield	P. Faulks	10	..	10	78	36	3	6	105	114	..	114
Dunmore Jc.	H. N. Cavan	910	433	1,343	1,090	745	103	107	1,625	821	1,014	1,835
Dunrooy	G. F. Snoxell	12	..	12	264	176	..	10	430	374	66	440
Duchess	C. J. Christianson	..	..	..	..	..	..	..	..	..	..	..
Eckville	D. C. Clauson	19	..	19	509	307	90	34	692	753	63	816
Edberg	H. Kibbie	80	..	80	129	123	4	35	213	237	15	252
Edgerton	A. Lawrence	10	44	54	1,178	860	58	86	1,894	1,153	885	2,038
Edmonton	W. A. Flack	43	16	59	3,492	3,054	450	1,191	4,905	5,211	1,335	6,546
Edmonton	C. Logan	645	95	740	199	347	93	92	361	513	33	546
Edmonton	F. Tomlinson	2,998	536	3,534	13,684	8,811	1,068	3,412	18,015	14,887	7,608	22,495
Egremont	J. A. Soucy	4	..	4	289	117	2	9	395	406	..	406
Elmira	A. Hogg	147	..	147	1,254	938	1	92	2,099	1,954	238	2,192
Empress	H. H. Hall	26	46	72	382	226	6	17	585	26	582	608
Entwistle	S. S. Munroe	..	..	..	..	..	..	..	..	..	..	..
Edson	A. J. Fyfe	35	..	35	37	3	..	..	40	40	..	40
Erskine	J. A. Chapman	8	..	8	121	106	..	23	204	219	8	227

Etzikon	W. Thiel	64	5	69	407	503	62	56	792	910	910
Federal	F. Kibben										
Fortnosh	W. A. McIntyre	75		75	727	563	31	181	1,078	1,136	1,291
Fleet	D. D. Frederickson	14		14	25	4	3	1	25	29	29
Foremost	A. D. Medharsst										
Forestburg	J. S. Ausherman										
Fort, Sask.	A. Schmidt	27		27	415	255	41	9	600	580	650
Gadsby	E. E. Hall	78	17	95	2,022	813	94	158	2,613	1,963	2,865
Gainford	B. Ryley	14		14	9	12	2	2	17	21	21
Galahad	M. Kueher										
Garden Plain	H. McArthur				351	194	2	25	518	545	545
Gleichen	T. Henderson	279			275	69	69		344	144	344
Grainger station	J. McLeod	517	82	361	3,272	1,996	347	452	4,469	3,799	5,268
Grande Prairie	H. W. Smith			517	1,173	555	26	117	1,855	2,028	2,028
Granum	P. Vandervoort				325	47		1	371	372	372
Grassy Lake	R. McLaughlin										
Greenshields	C. F. Gibson										
Gwynne	G. A. Beavo	18		18	206	222					
Halkirk	W. L. Fulton	52	4	56	1,069	827	42	236	1,618	1,239	1,896
Hanna	G. R. Cope	131		131	1,105	1,307	75	351	1,986	2,412	2,412
Hardisty	A. W. Dixon										
Hay Lake	R. R. McKay										
Haynes	C. H. Buckell										
Heisler	H. Griffiths										
Hespero	G. H. Macdonell										
Hobdema	J. Kraemer	107		107	85	139	23	39	162	200	224
Holden	A. C. Brown										
Hughenden	J. Adcock (Dep.)										
Hughenden	T. A. Hall	65	13	78	296	134	23	14	393	172	430
High Prairie	C. S. Spalding										
Hussar	J. Dundas	37	2	39	4,939	2,598	451	253	6,833	5,534	7,537
Huxley	L. A. Cady	298	18	316	468	301	109	75	585	769	769
High River	W. J. Irving	153	36	189	1,899	1,538	198	229	3,010	2,836	3,437
Heath	J. L. La Roche										
Hidesleigh	C. W. Smiley		23	23	34	46			80	80	80
Innisfail	W. J. Pendergast	340	25	365	2,199	1,780	216	426	3,337	3,395	3,979
Innisfree	L. M. Trace				125	62	3	1	183	136	187
Irma	W. B. Peterson	30	13	43	669	518	55	105	1,027	1,058	1,187

Milk River	W. J. Quinn	24	5	29	592	569	57	292	812	1,158	3	1,161
Millet	J. B. Smith											
Minburn	E. Huffman											
Mirror	A. Ray											
Monitor	R. Cranmer	27	2	29	328	111	7	11	421	207	232	439
Morinville	F. Beaudry	29		29	449	274	24	62	637	723		723
Morinville	J. D. Morin (Dep.)											
Morley	F. Wellman											
Morley	W. R. Stickney	50		50	538	700	132	237	869	1,238		1,238
Morrin	K. S. Flown	10	1	11	343	342	42	132	511	685		685
Mundare	Val Mohr	16	8	24	1,528	898	11	5	2,410	2,380	46	2,426
Munson	W. C. King											
Munson	A. M. Vallery	114		114	397	336	101	98	534	733		733
Morningside	P. Butlin											
Manyberries	J. W. Smiley	598		598	150	95	14	30	201	245		245
Nanaka	E. C. Watts	55		55	201	103	1	1	302	304		304
Nanton	W. Robertson	474		474	5,429	4,109	657	1,267	7,614	6,678	2,860	9,538
Natchy	H. Forster	12		12	27	78	52		53	105		105
Nevis	R. H. Fox	9	45	54	139	359		139	259	80	418	498
New Dayton	D. M. Boyd	8		8	200	196	1	8	387	217	179	396
Nordegg	F. Spoor	29		29		1			1			1
Nobleford	H. Shearer											
Obaton	A. W. Fleming	13	26	39	238	74	12	6	294	312		312
Okotoks	G. C. S. Patterson											
Olds	T. McKercher											
Onaway	T. J. Meeklam	4		4	41	14			55	55		55
Opal	P. J. Wacowich	9		9	185	75	1	11	248	260		260
Oyen	J. J. Holloway											
Parkland	A. E. Jones	132	4	136	206	192	31	106	261	373	25	398
Patricia	N. Stafford	21	10	31	198	79	2	150	125	255	22	277
Peace River Cross	J. D. Landale	38	12	50	163	178	1	2	338	339	2	341
Penhold	J. N. Hart											
Perryvale	T. Lewis											
Pinebeck	S. W. Berry											
Ponoka	W. E. Turner	92	27	119	1,832	1,044	130	213	2,533	2,817	59	2,876
Provost	T. M. Morrell	79	30	109	641	188	1	60	768	79	750	829
Purple Springs	G. R. Palfrey	16		16	265	133	32	25	341	398		398
Plain Lake	M. Tonym											
Rantlurly	J. McDonald	26		26	215	121	42	8	289	339		339

Sylvan Lake	W. C. Petro	37	...	37	124	88	1	1	210	212	...	212
Stony Plain	T. J. Hadley	24	38	24	11	57	6	...	62	68	...	68
Strathcona	G. S. Macdonald	98	...	136	130	143	16	25	232	248	25	273
Taber	W. C. Lane .....	...	...	...	...	...	...	...	...	...	...	...
Taber	H. Sparks	17	109	109	677	672	67	184	1,098	1,321	28	1,349
Tees	E. F. Heath .....	...	...	...	36	25	...	10	51	61	...	61
Three Hills	C. P. McDonough	43	...	43	103	86	22	46	121	129	60	189
Tofield	N. S. Smith	196	8	204	903	760	79	168	1,416	1,400	263	1,661
Trochu	H. Durant	98	...	98	549	372	73	70	778	921	...	921
Travers	T. W. Banister .....	...	...	...	...	...	...	...	...	...	...	...
Thorhild	U. G. Jardy .....	...	...	...	34	16	...	4	46	50	...	50
Vermilion	W. W. Shafere	43	13	56	2,862	1,084	14	20	3,912	861	3,085	3,946
Vermilion	H. Woods .....	...	...	...	480	233	23	...	651	353	360	713
Veteran	H. L. Bidleman	40	9	49	...	...	...	39	...	...	...	...
Veteran	F. Pringle .....	...	...	...	...	...	...	...	...	...	...	...
Viking	P. N. Kjosness .....	...	...	...	...	...	...	...	...	...	...	...
Viking	L. Kelly (Dep.) .....	...	...	...	...	...	...	...	...	...	...	...
Vulcan	G. Todd .....	...	...	...	...	...	...	...	...	...	...	...
Vegreville	A. W. Liddiott .....	...	...	...	...	...	...	...	...	...	...	...
Wabamun	S. White	24	23	24	62	59	9	8	104	121	...	121
Wainwright	J. W. Brown	71	...	91	...	...	...	...	...	...	...	...
Wainwright	S. D. Mills .....	...	...	...	...	...	...	...	...	...	...	...
Walsh	J. W. Roberts	24	21	45	1,301	830	...	...	2,130	1,350	781	2,131
Warner	A. P. Murphy	31	18	49	642	533	123	101	951	1,041	134	1,175
Westlock	L. H. Campbell	15	...	15	273	132	6	14	385	405	...	405
Wetaskiwin	C. A. Gouin .....	...	...	...	...	...	...	...	...	...	...	...
Whitla	G. Murray	42	9	51	28	43	1	40	30	71	...	71
Wrentham	C. B. Perkins	4	...	4	64	43	...	...	107	107	...	107
Wetaskiwin	Dr. Johnson	277	85	362	2,528	1,622	156	870	3,124	3,281	869	4,150
Wetaskiwin	A. J. Johnson .....	...	...	...	...	...	...	...	...	...	...	...
...	...	30,895	6,003	36,898	193,611	141,583	18,960	23,080	293,154	235,624	99,570	335,104



*APPENDIX TO THE REPORT OF THE
SUPERINTENDENT OF FAIRS AND INSTITUTES*

POULTRY ASSOCIATIONS.

No.	SOCIETY	Gov't grant 1917.	Receipts	Expendi- ture	Balance on hand	Over- draft	Assets	Liabilities	Date of Show	Gov't grant 1918
793	Edmonton	\$ 813.83	\$3,694.25	\$3,715.07	\$	\$ 23.82	\$1,787.85	\$1,696.04	Dec. 3-6	\$1,239.17
794	Calgary	1,697.13	6,024.89	6,824.37		799.48	1,695.16	1,781.73	Nov. 26-29	1,521.53
799.1	Medicine Hat	459.33	1,685.03	1,695.01	.02		935.02	500.00	Dec. 17-20	500.50
799.3	Wetaskiwin	300.00	839.35	832.64	6.71		118.30	300.00	Jan. 1-4 (1919)	300.00
795	Lethbridge	704.67	2,608.19	2,649.31		41.12	1,423.51	741.12	Dec. 10-13	791.27

HORTICULTURAL ASSOCIATIONS.

No.	SOCIETY	Gov't grant 1917.	Receipts	Expendi- ture	Balance on hand	Over- draft	Assets	Liabilities	Date of Show	Gov't grant 1918
769	St. Albert	\$ 206.35	\$ 647.90	\$ 647.90	\$	\$	\$	\$	Aug. 22	\$ 275.40
770	Magrath	131.05	196.80	196.80					Sept. 2	140.45
771	Talbot	237.50	302.84	293.17	9.67		9.67		Aug. 23	208.15
774	Medicine Hat	300.00	1,396.82	1,262.51	134.31		192.18	6.50	Aug. 22-23	300.00
777	Islay	28.50	28.50	220.71	173.30		41.41		Sept. 7	39.50
778	Noerlinda		187.00	177.14	9.86		9.86	105.00	Sept. 19	107.00
•766	Edmonton									
•767	Calgary									
•768	Red Deer									

*Not yet complete.

No.	SOCIETY	Gov't grant paid in 1917	Total Receipts	Total Ex- penditure	Balance on Hand	Over- draft	Assets	Liabi- lities	Date of Exhibition	No. of en- tries
1	Carlston	\$ 801.33	\$ .....	\$ .....	\$ .....	\$ .....	\$ .....	\$ .....	.....	...
2	Magrath	1,612.97	.....	.....	.....	.....	.....	.....	.....	...
3	Didsbury	732.10	3,366.11	3,309.49	56.62	.....	1,156.47	.....	Sept. 26-27	776
4	Innisfail	1,570.33	4,920.20	4,981.49	.....	61.20	6,725.50	3,925.38	Sept. 18-19	934
5	Lacombe	.....	.....	.....	.....	.....	.....	.....	.....	...
6	Red Deer	3,150.00	15,959.39	15,808.96	159.34	.....	3,986.34	3,633.95	July 29-31	1,045
7	Macleod	1,442.17	5,438.30	5,436.90	1.40	.....	1,472.20	2,852.17	Aug. 7-8	1,049
8	Medicine Hat	.....	.....	.....	.....	.....	.....	.....	.....	...
9	Olds	.....	.....	.....	.....	.....	.....	.....	.....	...
10	Pincher Creek	275.33	.....	.....	.....	.....	.....	.....	.....	...
11	Ponoka	1,203.87	4,927.39	4,729.80	198.19	.....	1,248.19	1,250.00	Sept. 18-19	560
12	Raymond	.....	.....	.....	.....	.....	.....	.....	.....	...
13	Okotoks	672.50	887.06	894.07	.....	7.01	1,350.00	232.01	.....	...
14	Vegreville	1,415.83	2,330.38	2,336.00	.....	5.62	260.00	508.12	.....	...
15	Wetaskiwin	2,525.27	8,005.81	7,984.04	21.77	.....	5,109.68	5,022.00	Aug. 20-21	985
16	Leduc	1,617.33	5,579.28	5,366.61	212.67	.....	2,035.14	211.00	Sept. 17-18	1,087
17	Nanton	519.83	.....	.....	.....	.....	.....	.....	.....	...
18	Vermilion	3,216.00	12,103.22	11,267.16	836.06	700.00	7,580.28	700.00	Sept. 11-12	1,771
19	High River	573.17	2,075.80	2,025.67	50.13	.....	1,574.33	16.00	July 18-19	534
20	Priddis and Millarville	507.83	1,593.12	1,595.96	.....	2.84	.....	552.84	Oct. 1	524
21	Viking and Birch Lake	.....	.....	.....	.....	.....	.....	.....	.....	...
22	District	977.50	3,972.97	3,825.67	120.30	.....	120.30	900.00	Sept. 20	851
23	Morinville	947.30	3,731.41	3,651.25	80.16	.....	2,127.92	2,300.00	Aug. 16	413
24	Manville	1,449.13	.....	.....	.....	.....	.....	.....	.....	...
25	Stettler	733.83	9,185.97	9,005.46	194.34	.....	5,709.34	2,615.80	Aug. 16-17	498
26	Daysland	707.17	2,793.78	2,766.64	27.14	.....	1,401.57	903.50	Aug. 6-7	566
27	Clareholm	811.17	3,535.57	3,529.27	6.30	.....	6.30	1,019.10	Aug. 30-31	752
28	Milnerton	924.33	2,818.97	2,713.55	105.42	.....	944.33	930.00	Oct. 1	642
29	Irvine	685.83	3,536.21	3,416.28	419.93	.....	2,849.93	1,791.70	Aug. 9-10	720
30	Taber	1,462.00	5,453.31	5,419.14	34.17	.....	4,306.50	1,429.60	July 31-Aug. 1	1,167
31	Innisfree	1,651.67	5,068.32	4,973.47	94.85	.....	1,595.18	2,031.45	Sept. 5-6	629
32	Sedgewick	1,479.33	7,742.58	7,737.93	4.65	.....	3,100.94	1,642.00	Aug. 8	489
33	Alix	333.57	986.27	1,672.97	.....	686.70	409.96	705.00	Sept. 20	496
34	Lloydminster	3,244.00	13,164.38	13,451.55	.....	287.17	3,365.00	3,251.65	Sept. 13-14	1,496
35	Camrose	3,058.00	24,838.73	26,586.76	.....	1,748.03	10,278.03	8,530.00	Aug. 1-3	1,252

N.	SOCIETY	Gov't grant paid in 1917	Total Receipts	Total Ex- penditure	Balance on Hand	Over- draft	Assets	Liabi- lities	Date of Exhibition	No. of en- tries
38	Irma	928.67	2,260.88	2,228.91	37.97	.....	2,288.87	750.00	Aug. 14	602
39	Crossin H.	1,528.25	6,267.11	6,135.81	1,313.30	.....	7,077.30	3,615.50	June 20 21	734
40	Benalto .....	.....	656.30	709.50	44.22	97.42	.....	.....	July 23	275
41	Bowden	659.50	2,015.25	2,000.91	15.24	.....	569.59	720.00	Sept. 21	596
45	Holten	705.73	.....	.....	.....	.....	1,063.50	.....	.....	.....
46	Cochrane	948.00	3,618.22	3,679.18	.....	60.96	1,063.50	1,384.96	Sept. 17-18	449
47	Stacy	931.20	4,103.61	4,134.05	.....	30.41	5,152.66	1,215.41	Aug. 9	493
48	Tofield	817.00	2,236.05	2,192.50	43.55	.....	2,013.55	1,625.05	Sept. 18	589
49	Strong Killam ..	856.82	3,877.25	3,796.75	80.50	.....	1,585.03	450.00	Aug. 13	886
50	Trochu	1,061.00	5,038.74	5,100.86	.....	62.12	4,538.60	2,462.12	Oct. 4	995
51	Fort Saskatchewan	1,282.00	2,662.05	2,241.85	417.20	.....	417.20	.....	Sept. 4 5	1,026
52	Granum .....	.....	.....	.....	.....	.....	260.28	124.00	.....	.....
53	Langdon & Bow River	835.00	897.78	1,021.50	.28	.....	.....	.....	.....	.....
54	Grande Prairie ..	614.00	.....	.....	.....	.....	10.56	350.00	Aug. 19-20	436
55	Castor	791.00	2,651.65	2,641.09	10.56	.....	.....	.....	.....	.....
56	Kitseoty	1,027.00	.....	.....	.....	.....	2,102.14	2,000.00	Aug. 15	1,182
57	Stony Plain	1,250.00	5,595.00	5,318.28	246.72	.....	.....	.....	.....	.....
59	Swallow	682.50	.....	.....	.....	137.82	.....	.....	.....	.....
60	Entwistle	541.83	691.77	618.85	45.82	.....	.....	.....	.....	.....
61	Carmangay	740.50	.....	.....	.....	.....	.....	.....	.....	.....
62	Eastern Alberta ..	594.67	2,058.05	2,020.30	29.31	.....	1,440.14	593.00	Aug. 9	970
64	Mid-Pembina	369.33	1,331.26	1,259.13	72.13	.....	731.58	236.00	Sept. 13	568
66	Paddle River	494.67	1,990.38	1,931.35	59.03	.....	1,200.00	100.00	Sept. 19	475
69	Elk Point	331.53	1,060.26	1,001.10	59.16	.....	109.16	291.50	Sept. 6-7	273
70	Wainwright	1,002.50	.....	.....	.....	.....	.....	.....	.....	.....
71	North Alberta	1,010.67	5,129.82	5,016.90	82.92	.....	2,113.34	1,469.75	Sept. 17	893
72	Edgerton	1,046.77	.....	.....	.....	.....	.....	.....	.....	.....
73	Munson	685.30	2,462.24	2,421.28	40.96	.....	1,145.30	865.50	Aug. 15	616
74	Legal .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
75	Clauvin	53.00	1,362.02	1,201.41	158.61	.....	1,996.28	856.55	Aug. 15	537
76	Lake Saskatchewan	1,298.00	2,960.56	3,169.75	.....	209.19	1,918.00	1,169.75	Sept. 20 21	428
77	Onoway	387.33	737.74	539.45	198.29	.....	1,273.29	208.00	.....	.....
78	Nakamun	341.17	373.90	373.05	.85	.....	163.00	28.00	.....	.....
79	Bow Valley .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
80	Hays	1,151.83	4,280.44	4,260.54	19.90	.....	2,073.59	1,709.29	Sept. 24 25	1,002
81	Coronation	801.83	3,414.57	3,414.52	.05	22.89	4,182.35	2,855.02	Aug. 21-22	809

82	Griffin Creek	393.82	1,209.50	1,200.35	9.15	17.57	477.00	448.57	Sept. 9-10	...
85	Winnifred	401.83	2,796.48	2,575.46	221.02	...	4,189.52	2,500.00	Aug. 8-9	961
86	Gadsby	242.00	...	...	...	...	...	...	...	...
• 87	Edson	...	...	...	...	...	...	...	...	...
88	Spirit River	...	...	...	...	...	...	...	...	...
89	Clunook	523.00	6,393.99	6,224.26	169.73	...	2,279.73	1,510.00	Aug. 9	679
• 90	Youngtown	...	...	...	...	...	...	...	...	...
91	Consort	629.33	3,896.22	3,384.84	511.38	...	3,369.78	1,821.65	Sept. 25-26	608
93	Rocky Mountain House	403.16	994.86	1,331.25	...	336.39	590.00	499.69	Sept. 23-24	553
95	Manyberries	157.00	...	...	...	...	...	...	...	...
96	Westlock	468.33	1,610.41	1,529.30	81.11	...	570.11	300.11	Sept. 21	783
• 97	St. Paul	...	...	...	...	...	...	...	...	...
99	Wheatshaf	315.33	...	...	...	...	...	...	...	...
100	Highland	588.60	1,711.81	1,711.45	...	20.00	2,894.52	1,280.00	Aug. 13	684
101	Empress	250.00	1,237.98	1,230.55	7.43	...	335.36	360.15	Aug. 1	255
102	Hanna	864.46	2,713.27	2,693.64	19.63	...	1,854.23	720.00	Aug. 14	495
104	Bashaw	454.50	1,500.95	1,485.03	15.92	...	657.92	506.00	Sept. 24	690
105	Vulcan	318.37	1,515.09	1,269.49	245.51	...	5,852.86	1,365.77	Aug. 3	373
106	Berry Creek	627.83	4,614.48	4,670.80	...	50.74	3,488.66	1,200.74	Sept. 6	739
107	Waterhole	837.00	3,009.98	2,967.15	42.83	...	5,242.83	600.00	Sept. 12-13	491
• 108	Oyen	...	...	...	...	...	...	...	...	...
109	Donalda	...	4,133.54	4,086.49	47.05	...	4,585.60	3,459.55	Aug. 27	424
111	Peace River	599.67	2,231.12	2,228.63	1.49	...	1,064.29	1,129.55	Sept. 6-7	342
112	Suifield	...	...	...	...	...	...	...	...	...
113	Etzikom	447.13	...	...	...	...	...	...	...	...
114	Retlaw	522.33	4,254.38	4,253.85	...	...	3,425.53	2,555.80	Aug. 2-3	674
115	Busby	237.95	1,059.43	949.11	110.32	...	110.35	200.00	Sept. 17	618
116	Boucher	306.00	1,984.14	1,781.69	202.69	...	202.69	...	Sept. 10	618
• 117	Sibbald	...	...	...	...	...	...	...	...	...
118	Lonond	539.50	2,967.63	2,960.35	7.28	...	2,841.53	3,036.40	Aug. 6-7	516
• 119	Richdale	...	...	...	...	...	...	...	...	...
120	Lamont	...	1,150.00	1,062.13	87.87	...	378.37	685.50	Aug. 20	492
121	Big Valley	...	1,144.95	1,071.28	73.67	...	73.67	200.00	Aug. 24	397
123	Veteran	...	838.50	835.05	3.45	259.00	23.45	259.00	Aug. 9-10	269
EXHIBITION ASSOCIATIONS.										
• 200	Lethbridge	...	...	...	...	...	...	...	June 28-July 6	...
202	Calgary	13,000.00	116,480.79	104,363.42	12,117.37	...	30,630.01	2,626.91	June 8-12	5,152
203	Edmonton	13,000.00	92,473.71	69,664.67	25,808.20	...	29,028.30	3,220.10	July 8-12	...
204	Athabasca	1,070.00	3,152.12	2,725.33	426.79	...	1,919.86	1,480.05	Sept. 19-20	957

No	SOCIETY	Amt. paid in prizes at exhibi- tion	Amt. paid in prizes for sports	Field Grain Compet'n	Seed Fair	Poultry Show	Horticultur- al Show	Gov't grant paid in 1918
82	Griffin Creek	574.28						467.85
83	Winnifred	1,440.55						1,110.37
86	Gadsby		154.50					
87	Edson							
88	Spirit River							
89	Chinook	781.25						625.83
90	Youngstown		209.10					759.40
91	Consort	911.10			61.00			568.00
93	Rocky Mountain House	688.50						488.67
95	Maniberries							
96	Westlock							
97	St. Paul	599.50	51.50					
99	Wheatshaf							
100	Highland	891.25						744.13
101	Empress	287.90	554.00					325.93
102	Ilanna	496.50	369.00					481.00
104	Bastaw	493.00	84.00					458.67
105	Vulcan	498.80	222.50					462.13
106	Berry Creek	896.50	263.50					747.67
107	Waterhole	955.75	176.50					787.17
108	Oyen							
109	Donalda	308.00						584.67
111	Peace River	766.25	378.25					635.83
112	Suffield							
113	Etzikom							
114	Retlaw	1,307.75	480.75					960.83
115	Busby	508.30						432.87
116	Boucher	1,279.75						948.17
117	Sibbald							
118	Lomond	936.50	353.00					
119	Richdale							
120	Lamont	740.50	100.00					601.67
121	Big Valley	545.05						462.37
123	Veteran	576.75	79.00					532.50



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Compliments
of
The Honourable Duncan Marshall
Minister of Agriculture
Alberta, Canada

